

*To the Reader.*

**C**ourteous Reader : In this manner as you drawe out these Knots, with the like helpes and lines also, you shall draw out your Mazes and Laborynthes, of what sort soeuer you please, whether they be round or square. And forasmuch as not any Booke whatsoeuer hath so many, so excellent, so good and so profitable for thy vse : Let me intreat thee to make vse of this, vntill in short time I shall publish a most perfect and exact Booke of the Art of *Planting, Grafting, and Gardening.* Which (God willing) shall not be long before it be performed, vntill which time, I wish the health and happinesse.

*Thy friend I. M.*

---

*London Printed for Iohn Marriott, and are to bee  
at his Shop in Saint Dunstons Church yard in  
Fleetstreete. 1633.*

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# A NEW ORCHARD and Garden: *967.2.4.* OR

The best way for planting, grafting, and to make  
*any ground good, for a rich Orchard: Particularly in the North,*  
and generally for the whole kingdome of England, as in nature,  
*reason, situation, and all probabilitie, may and doth appeare.*

With the Country Housewives Garden for herbs of common vse, their  
*vertues, seasons, profits, ornaments, varietie of knots, models for trees, and*  
plots for the best ordering of Grounds and Walkes.

AS ALSO

*The Husbandry of Bees, with their severall uses and annoyances, all being the*  
experience of 48. yeeres labour, and now the third time corrected and  
much enlarged, by William Lawson. *K.*

Whereunto is newly added the Art of propagating Plants, with the true ordering  
of all manner of Fruits, in their gathering, carrying home, and preservation.

*Skill and paines bring fruitfull gaines.*



*Nemo sibi natus.*

# NEW ORCHARD and Garden:

OR

The best way for planting, grafting, and to make  
any ground good for a fine Orchard: Particularly in the North,  
and generally for the whole Kingdom of England, as in names,  
reason, situation, and all probabilities may and should appear.

With the Country Housewife's Garden for herbs of common use, their  
several seasons, and the manner of their culture, for use and  
profit for the best ordering of Grounds and Walks.

AS ALSO

The Husbandry of Bees, with their several uses and advantages, all being the  
experience of 18 years labour, and now the third time corrected and  
much enlarged, by William Lister.  
Whose name is now added to the Art of propagating Plants, with the choice of doing  
all manner of Plants in their several manner, and situation.



Printed by J. Smith

Printed by J. Smith





# TO THE RIGHT WORSHIPFULL,

SIR HENRY BELOSSES

Knight and Baronet.

*Worthy Sir,*



Hen in many yeeres by long  
experience I had furnished this  
my Northerne Orchard and  
Countrey Garden with need-  
full plants and vsfull hearbs,  
I did impart the view thereof  
to my friends, who resorted  
to me to conferre in matters  
of that nature, they did see it,  
and seeing it desired, and I

must not denie now the publishing of it (which then I al-  
lotted to my priuate delight) for the publike profit of  
others. Wherefore, though I could plead custome the  
ordinary excuse of all Writers, to chuse a Patron and Pro-  
tector of their Workes, and so shroud my selfe from scan-  
dall vnder your honourable fauour, yet haue I certain rea-  
sons to excuse this my presumption: First, the many cour-  
tesies

## The Epistle Dedicatory.

tesies you haue vouchsafed me. Secondly, your delightfull skill in matters of this nature. Thirdly, the profit which I receiued from your learned discourse of Fruit trees. Fourthly, your animating and assisting of others to such endeouours. Last of all, the rare workes of your owne in this kinde: all which to publish vnder your protection, I haue aduentured (as you see.) Vouchsafe it therefore entertainment, I pray you, and I hope you shall finde it not the vnprofitablest seruant of your retinue: for when your serious employments are ouerpasse, it may interpose some commoditie, and raise your contentment out of varietie.

*Your Worships*

*most bounden,*



**WILLIAM LAVVSON.**





# THE PREFACE

to all well minded.

**A**RThath her first originall out of experience, which therefore is called the Schoole-mistresse of fooles, because she teacheth infallibly, and plainly, as drawing her knowledge out of the course of Nature, (which neuer failes in the generall) by the senses, feelingly apprehending, and comparing (with the helpe of the minde) the workes of nature; and as in all other things naturall, so especially in Trees: for what is Art more then a provident and skilfull Collectrix of the faults of Nature in her particular workes, apprehended by the senses? As when good ground naturally brings forth thistles, trees stand too thicke, or too thin, or disorderly, or (without dressing) put forth unprofitable suckers, and such like. All which, and a thousand more, Art reformeth, being taught by experience: and therefore must we count that Art the surest, that stands upon experimentall rules, gathered by the rule of reason (not conceit) of all other rules the surest.

Whereupon haue I of my meere and sole experience, without respect to any former written Treatise, gathered these rules, and set them downe in writing, not daring to hide the least talent giuen mee of my Lord and Master in Heauen: neither is this iniurious to any, though it differ from the common opinion

## The Preface.

in diuers points, to make it knowne to others, what good I haue found out in this faculty by long triall and experience. I confesse freely my want of curious skill in the Art of planting. And I admire and praise Plinie, Aristotle, Virgil, Cicero, and many others for wit and iudgement in this kinde, and leaue them to their times, manner, and seuerall Countries.

I am not determined (neither can I worthily) to set forth the praises of this Art: how some, and not a few, euen of the best, haue accounted it a chiefe part of earthly happinesse, to haue faire and pleasant Orchards, as in Hesperia and Thessaly, how all with one consent agree, that it is a chiefe part of Husbandry (as Tully de senectute) and Husbandry maintaines the world; how ancient, how profitable, how pleasant it is, how many secrets of nature it doth containe, how loued, how much practised in best places, and of the best: This hath already beene done by many. I onely aime at the common good. I delight not in curious conceits, as planting and grassing with the root upwards, inoculating Roses on Thornes, and such like, although I haue heard of diuers, proued some, and read of moe.

The Stationer hath (as being most desirous with me, to further the common good) bestowed much cost and care in hauing the Knots and Models by the best Artizan cut in great varietie: that nothing might be any way wanting to satisfie the curious desire of those that would make vse of this booke.

And I shew a plaine and sure way of planting, which I haue found good by 48. yeeres (and moe) experience in the North part of England: I preiudicate and enuie none, wishing yet all to abstaine from maligning that good (to them unknowne) which is well intended. Farewell.

Thine, for thy good,

W. L.



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the first part of the treatise



# THE BEST, SVREST, AND READIEST WAY TO make a good Orchard and Garden.

## CHAP. I.

### *Of the Gardener, and his Wages.*

**W**hoſoeuer deſireth and endeouureth to haue a  
pleasant, and profitable Orchard, muſt (if he be  
able) provide himſelfe of a Fruiterer, religi-  
ous, honeſt, ſkilfull in that faculty, and there-  
withall painfull: By religious, I meane (be-  
cause many thinke religion but a faſhion or cu-  
ſtome to goe to Church) maintaining, and cheriſhing things re-  
ligious: as Schooles of learning, Churches, Tythes, Church-  
goods, and rights: and aboue all things, Gods word, and the  
Preachers thereof, ſo much as he is able, practiſing prayers,  
comfortable conference, mutuall inſtruction to euill, almes, and  
other workes of Charity, and all out of a good conſcience.

Religi-  
ous.

Honeſtie in a Gardener, will grace your Garden, and all your Honest.  
houſe, and helpe to ſtay vnbridled ſeruingmen, giuing offence  
to none, not calling your name into queſtion by diſhoneſt acts,  
nor infecting your family by euill counſell or example. For there  
is no plague ſo infectious as Popery and knauery, he will not  
purloine your profit, nor hinder your pleaſures.

Concerning his ſkill, hee muſt not be a Scholiſt, to make Skilfull.  
ſhew of or take in hand that, which he cannot perſorme, ſpe-  
cially in ſo weighty a thing as an Orchard: than the which,  
there can be no humane thing more excellent, either for plea-  
ſure



sure or profit, as shall (God willing) be proued in the treatise following. And what an hinderance shall it be, not onely to the owner, but to the common good, that the vnspeakable benefit of many hundred yeeres shall be lost, by the audacious attempt of an vnskillfull Arbozist?

**Painfull.**

The Gardner had not need be an idle, or lazie Lubber, for so your Orchard being a matter of such moment, will not prosper. There will euer be some thing to doe. Weeds are alwayes growing. The great mother of all liuing Creatures, the Earth, is full of seed in her bowels, and any stirring giues them heat of Sunne, and being laid neere day, they grow: Howles worke daily, though not alwayes alike. Winter herbs at all times will grow (except in extreme frost.) In Winter your yong trees and herbs would be lightned of Snow, and your Allyes cleansed: drifts of snow will set Deere, Hares, and Conies, and other noysome beasts ouer your wals and hedges, into your Orchard. When Summer cloathes your borders with greene and peckled colours, your Gardner must dresse his hedges, and another worke: watch his Bees, and hieue them: distill his Roses, and other herbs. Now begins Summer Fruit to ripe, and cranie your hand to pull them. If he haue a Garden (as he must need) to keepe, you must needs allow him god helpe, to end his labours which are endlesse, for no one man is sufficient for these things.

**Wages.**

Such a Gardner as will conscionably, quietly and patiently, trauell in your Orchard, God shall crowne the labors of his hands with ioyfulnesse, and make the clouds drop fatnesse vpon your trees, he will prouoke your lone, and earne his wages, and fees belonging to his place: The house being serued, fallen fruit, superfluity of herbs, and flowers, seeds, grattes, sets, & besides other offall, that fruit which your bountifull hand shall reward him withall, will much augment his wages, and the profit of your Trees will pay you backe againe.

If you be not able, nor willing to hire a Gardner, keepe your profits to your selfe, but then you must take all the paines: And for that purpose (if you want this faculty) to instruct you, haue I vnderaken these labours, and gathered these Rules, but chiefly respecting my Countries good.

CHAP.



## CHAP. II.

## Of the Soyle.



**F**ruit-Trees most common, and meetest for our  
northerne Countries: (as Apples, Peares, Cher-  
ries, Filberds, red and white Plums, Damsons  
and Bulles,) for we meddle not with Apricocks  
nor Peaches, nor scarcely with Dutches, which

Kindes  
of trees.

will not like in our cold parts, unless they be  
helped with some reffer of Sunne, or other like meanes, nor  
with bushes, bearing berries, as Barberries, Gosberries, or  
Grosers, Raspberries, and such like, though the Barbery be  
wholesome, and the tree may be made great: doe require (as all  
other trees doe) a blacke, fat, mellow, cleane and well tempered  
soyle, wherein they may gather plenty of good sap. Some thinke  
the Wasell would haue a channell rocke, and the Sallow, and  
Eller a waterish marish. The soile is made better by deluing,  
and other meanes, being well melted, and the wildnesse of the  
earth and weeds (for enery thing subject to man, and seruing his  
use, not well ordered, is by nature subject to the curse) is killed  
by frosts and drought, by fallowing and laying on heapes, and  
if it be wild earth, with burning.

Soyle.

If your ground be barren (for some are forced to make an Barren  
Orchard of barren ground) make a pit thre quarters deepe, and  
two yards wide, and round in such places where you would set  
your trees, and fill the same with fat, pure, and mellow earth,  
one whole foot higher than your Soyle, and therein set your  
Plant. For who is able to manure an whole Orchard plot, if  
it be barren? But if you determine to manure the whole site,  
this is your way: digge a trench halfe a yard deepe, all along the  
lower (if there be a lower) side of your Orchard plot, casting vp  
all the earth on the inner side, and fill the same with good short,  
hot, and tender mucke, and make such another Trench, and fill  
the same as the first, and so the third, and so throughout your  
ground. And by this meanes your plot shall be fertile for your  
life. But be sure you set your trees, neither in dung nor bar-  
ren earth.

Your ground must be plaine, that it may receiue, and Plaine.

keepe



Moyst.

keepe moysture, not onely the raine falling thereon, but also water cast vpon it, or descending from higher ground by Sluices, Conduits, &c. For I account moysture in Summer very needfull in the soyle of trees, and brought in Winter. Provided, that the ground neither be boggie, nor the inundation be past 24. houres at any time, and but twise in the whole Summer, and so oft in Winter. Therefore if your plot be in a Banke, or haue a descent, make Trenches by degrees, Allyes, Walkes, and such like, so as the Water may be staied from passage. And if too much water be any hinderance to your walkes (for dry walkes doe well become an Orchard, and an Orchard them:) raise your walkes with earth first, and then with stones, as bigge as Walnuts: and lastly, with graniell. In Summer you need not doubt too much water from heauen, either to hurt the health of your body, or of your trees. And if overflowing molest you after one day, auoid it then by deepe trenching.

Some for this purpose digge the soyle of their Orchard to receiue moisture, which I cannot approue: for the roots with digging are oftentimes hurt, and especially being digged by some vnskilfull seruant: For the Gardiner cannot doe all himselfe. And moreover, the roots of Apples and Peares, being laid neere day, with the heat of the Sunne, will put forth suckers, which are a great hinderance, and sometimes with euill guiding, the destruction of trees, vnlesse the deluing be very shallow, and the ground laid very leuell againe. Cherries and Plums without deluing, will hardly or neuer (after twenty yeeres) be kept from such suckers, nor aspes.

Grasse.

Grasse also is thought needfull for moysture, so you let it not touch the roots of your trees: for it will breede mosse, and the boall of your tree neere the earth would haue the comfort of the sunne and ayre.

Some take their ground to be too moist when it is not so, by reason of waters standing thereon, for except in soure marshes, springs, and continuall ouer-flowings, no earth can be too moist. Sandy and fat earth will auoid all water falling by receipt. Indeed a stiffe clay will not receiue the water, and therefore if it be grassie or plaine, especially hollow, the water will abide, and it will seeme waterish, when the fault is in the want of maring, and other good dressing.



This plainesse which I require, had need be naturall, & cause to force an barren ground will destroy the fatnesse. For every soile hath his crust next day to herein trees and herbes put their roots, and whence they draw their sap, which is the best of the soile, and made fertile with heat and cold, moisture and drought, and under which, by reason of the want of the said temperature, by the said four qualities, no tree nor herbe (in a manner) will or can put root. As may be seen if in digging your ground, you take the weeds of most growth: as grasse or docks, (which will grow though they lye upon the earth bare) put vnder them under the crust, and they will surely dye and perishe, and become manure to your ground. This crust is not past 19 or 21 inches deepe in good ground, in other grounds less. If it should appeare the fault of forced plainesse, viz. your crust in the lower parts, is covered with the crust of the higher parts, and both with waste earth your heights having the crust taken away, are become merely barren: so that either you must force a new crust, or have an euill soile. And be sure you lenelly before you plant, lest you be forced to remove, or hurt your plants by digging, and casting amongst their roots. Your ground must be cleared as much as you may of stones, and gravel, wals, hedges, bushes and other weeds.

Natural-  
ly plaine.Crust of  
the earth.

## CHAP. III.

## Of the Site.

**T**here is no difference that I finde betwixt the necessity of a good soile, and a good site of an Orchard. For a good soile (as is before described) cannot want a good site, and if it doe, the fruit cannot be good, and a good site will much mend an euill soile. The best site is in low Low and grounds, (and if you can) nere vnto a Riuer. nere a High grounds are not naturally fat. And if they haue any Riuer. fatnesse by mans hand, the very descent in time doth wash it away. It is with grounds in this case as it is with men in a common-wealth. Each will haue moze, and once poze, seldome or neuer rich. The raine will scind, and wash, and the wind will blow fatnesse from the heights to the hollowes, where it

it will abide, and fatten the earth though it were barren before. Hence it is, that we have seldome any plaine grounds, and low, barren: and as seldome any heights naturally fertile. It is unspeakable, what fatnesse is brought to low grounds by inundations of waters. Neither did I ever know any barren ground in a low plaine by a River side. The goodnesse of the soile in Hlowd or Hollow-dornes, in *Yorkshire*, is well knowne to all that know the River Humber, and the huge bulkes of their Cattell there. By estimation of them that have sene the low grounds in Holland, and Zealand, they farre surpasse the most Countries in Europe for fruitfulnessse, and onely because they lye so low. The world cannot compare with *Egypt*, for fertilitye, so farre as *Nile* doth river flow by his banks. So that a better place cannot be chosen for an Orchard, than a low plaine by a river side. For besides the fatnesse which the water brings, if any cloudy mist or raine be stirring, it commonly falls downe to, and followes the course of the River. And where for greater trees of bulk and bough, then standing out or nere the waters side? If you aske why the plaines in Holdernes, & such countries are destitute of woods? I answer, that men and cattell (that have put trees thence, from out of plaines to hold sojourns) are better then trees. Neither are those places without trees. Our old fathers can tell us, how woods are decayed, & people in the roomth of trees multiplied. I have stood somewhat long in this point, because some doe utterly condemne a moist soile for fruit-trees.

A low ground is good to avoid the danger of winds, both for shaking downe your unripe fruit, and blowing down your trees. Fruit blown unripe, are small worth: and though they be ripe, yet being bruised with the fall (especially if they be big) they are not good but for present use. Trees the most (that I know) being laden with wood, for want of proping, and growing high, by the unskillfulnessse of the Arbozist, must needs be in continuall danger of the South-west, West, and North-west winds, especially in September and March, when the aire is most temperate from extreme heat, and cold, which are deadly enemies to great winds. Wherefore chuse your ground low. Or if you be forced to plant in a higher ground, let high and strong wals, houses, and Trees, as Wall-nuts, Plane-trees, Oakes, and Ashes, placed in good order, be your fence for winds.

The

Psal. 1. 3.  
Eze. 17. 8.  
Eccl. 39. 17

Mark-  
ham.

Winds.  
chap. 13.



The facken of your Dwelling house, descending into your Orchard (if it be cleanly conneighed) is good.

The Sunne (in some sort) is the life of the world. It maketh Sunne. proud growth, and ripens kindly, and speedily, according to the golden tearme: *Annus fructificat, non relinquit.* Therefore in the Countreies, nearer approaching the Zodiacke, the Sunnes habitation, they haue better, and sooner ripe fruit, then we that dwell in these frozen parts.

This prouoketh most of our great Arborists, to plant Apple Trees a-rockes, Cherries, and Peaches, by a wall, and with tacks, and gainsta other meanes to spread them vpon, and fasten them to a wall, wall, to haue the benefit of the immoderate reflexe of the Sun, which is commendable, for the hauing of faire, good, and some ripe fruit. But let them know it is more hurtfull to their trees then the benefit they reape thereby can require; as not suffering a Tree to line the tenth part of his age. It helpes Gardeners to worke, for first the wall hinders the roots, because into a dry and hard wall of earth or stone, a tree will not, nor cannot put any root to profit, but especially it stops the passage of sap, whereby the bark is wounded, and the wood, and diseases grow, so that the tree becomes short of life. For as in the body of a man, the leaning or lying on some member, whereby the course of blood is stopt, makes that member as it were dead for the time, till the blood returne to his course, and I thinke, if that stopping should continue any time, the member would perish for want of blood (for the life is in the blood) & so endanger the body: so the sap is the life of the tree, as the blood is to mans body; neither doth the tree in winter (as is supposed) want his sap, no more then mans body his blood, which in winter, & time of sleep drawes inward. So that the dead time of winter, to a tree, is but a night of rest: for the tree at all times, euen in winter is nourished with sap, and groweth as well as mans body. The chilling cold may well some little time stay, or hinder the proud course of the sap, but so little & so short a time, that in enery calme, & mild season, euen in the depth of winter (if you marke it) you may easily perceiue the sap to put out, and your trees to increase their buds, which were formed in the summer befoze, and may easily then be discerned: for leaues fall not off, till they be thrust off with the knots or buds, wherupon it comes to passe that trees cannot beare fruit  
plon.



plentifully two years together, and make themselves ready to  
blossome against the seasonableness of the next Spring.

And if any frost be so extreme, that it stay the sap too much, or  
too long, then it kills the forward fruit in the very bud, & some-  
times the tender leaves and twigs, but not the tree. Wherefore  
(to returne) it is perillous to stop the sap. And where, or when,  
did you ever see a great tree packt on a wall? Nay, who did e-  
uer know a tree so unkindly splat, come to age? I have heard  
of some, that out of their Imaginary cunning, have planted such  
Trees on the North side of the wall, to avoid drought, but the  
heat of the Sunne is as comfortable (which they should have  
regarded) as the drought is hurtfull. And although water is a  
soveraigne remedy against drought, yet want of Sun is no way  
to be helped. Wherefore to conclude this Chapter, let your  
ground lie so, that it may have the benefit of the South, and West  
Sunne, and so low and close, that it may have moisture, and in-  
crease his fatnesse (for trees are the greatest suckers and pillers  
of earth) and (as much as may be) free from great winds.

## CHAP. IIII.

*Of the Quantitie.*

Orchard  
as good  
as a corn  
field.

I would be remembred what a benefit riseth,  
not onely to every particular owner of an  
Orchard, but also to the common-wealth, by  
Fruit, as shall be shewed in the 16. chapter  
(God willing) whereupon must needs fol-  
low: the greater the Orchard is (being good  
and well kept) the better it is, for of good  
things, being equally good, the biggest is the best. And if it shall  
appeare, that no ground a man occupieth (no, not the Corne-  
field) yeeldeth more gaine to the purse, and house-keeping (not  
to speake of the unspeakable pleasure) quantity for quantity,  
than a good Orchard (besides the cost in planting, and dress-  
ing an Orchard, is not so much by farre, as the labour and  
seeding of your Corne-fields, nor for durance of time, com-  
parable, besides the certainty of the one before the other) I see  
not how any labour, or cost in this kind, can be idly or walle-  
fully bestowed, or thought too much. And what other thing is a  
Wine.



Wineyard (in those Countries where Vines doe thriue) than a large Orchard of trees bearing fruit? Or what difference is there in the taste of the Grape, and our Cyder and Perry, but the goodnesse of the Soile and climate where they grow? which maketh the one more ripe, and so more pleasant then the other. Whatsoever can be said for the benefit rising from an Orchard, that makes for the largenesse of the Orchards bounds. And (me thinks) they doe preposterously, that bestow more cost and labour, and more ground in and upon a Garden than upon an Orchard, whence they reape and may reape both more pleasure and more profit, by infinite degrees. And further, that a Garden neuer so fresh, and faire, and well kept, cannot continue without both renewing of the earth, and the herbs often, in the short and ordinary age of a man: whereas your Orchard well kept shall dure diuers hundred yeeres, as shall be shewed chapter 14. In a large Orchard there is much labour saved, in fencing, and otherwise: for these little Orchards, or few trees, being (in a manner) all out-sides, are so blasted and dangered, and commonly in keeping neglected, and require a great fence; whereas in great Orchards, trees are a mutuall defence one to another, and the keeping is regarded, and lesse fencing serues six acres together, than three in severall inclosures.

Now what quantity of ground is meetest for an Orchard can no man prescribe, but that must be left to every mans severall iudgement, to be measured according to his ability and will, for ground, other necessities besides fruit must be had, and some are more delighted with Orchards then others.

Let no man having a fit plot plead poverty in this case, for an Orchard once planted will maintaine it selfe, and yeeld infinite profit besides. And I am perswaded, that if men did know the Land-right and best way of planting, dressing, and keeping trees, and lords, by felt the profit and pleasure thereof, both they that have no Orchards would have them, and they that have Orchards, would have them larger, yea fruit trees in their hedges, as in Wiltshire, &c. And I thinke, that the want of planting, is a great losse make to our common-wealth, & in particular, to the owners of Lord-ships, which Landlords themselves might easily amend, by shing granting longer terme, and better assurance to their Tenants, orchards who have taken up this Proverbe, Borch and sic, Build and sic: in England.

Compa-  
red with  
a Vine-  
yard.

Compa-  
red with  
a garden.

What  
land  
is  
best  
for  
an  
orchard

What

no hin-

their te-  
nants,

may

flouri-

orchards

for land.



for who will build, or plant for another mans profit: Or the Parliament might entayne every occupier of grounds, to plant and maintaine for so many acres of fruitfull ground, so many severall trees of kinde of trees for fruit. Thus much for quantity.

## CHAP. V.

## Of the Forme.

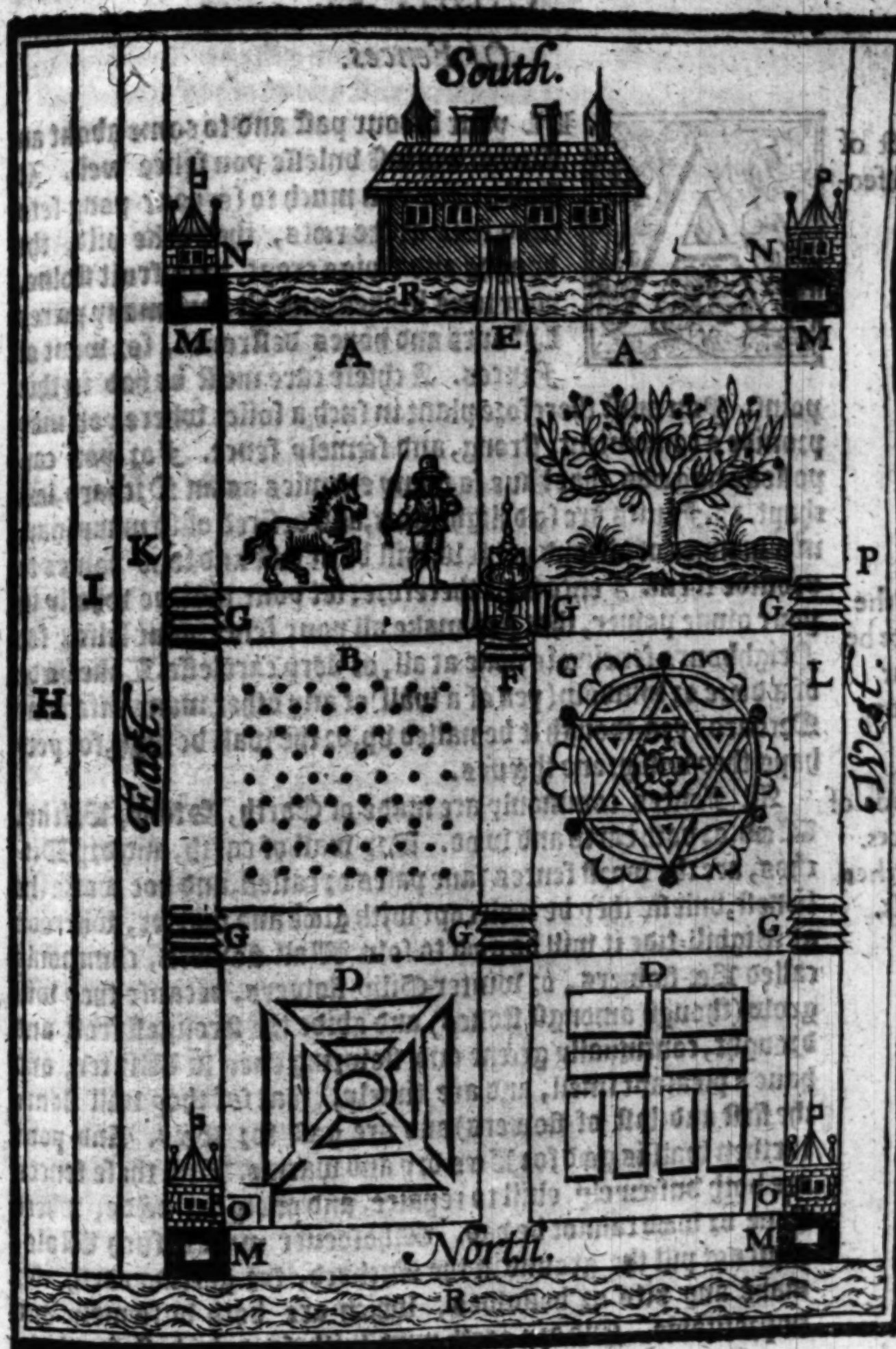


The v.  
suall  
forme is a  
square:

The goodnesse of the Soyle, and Site, are necessary to the well being of an Orchard simply, but the forme is so farre necessary, as the owner shall thinke meet, for that kinde of forme where with every particular man is delighted, we leave it to himselfe, *sum cuique pulchrum*. The forme that men like in generall is a square, for although roundnesse be *forma perfectissima*, yet that principle is good where necessity by art doth not force some other forme. Now for as much as one principall end of Orchards is recreation by walkes, and universally walkes are straight, it followes that the best forme must be square, as best agreeing with straight walkes: yet if any man be rather delighted with some other forme, or if the ground will not beare a square, I discommend not any forme so it be formall. And a square may be drawne out of any forme to make straight walkes; and no forme of it selfe is either good or bad for the trees. If within one large square the Gardener shall make one round Labyrinth or Maze with some kinde of Verries, it will grate your forme, so there be sufficient roomth left for walkes, so will foure or more round knots doe. For it is to be noted, that the eye must be pleased with the forme. I have seene squares rising by degrees with staires from your house-ward, according to this forme which I have, *Crassa quod avertit Minerva*, with an unsteady hand, rough he went, for in forming the Country Gardners, the better sort may use better formes, and more costly worke. What is needfull more to be said, I referre that all (concerning the Forme) to the chapter 17. of the ornaments of an Orchard.

CHAP.





A. All these squares must bee set with trees, the Gardens & other ornaments must stand in spaces betwixt the trees, & in the borders and fences.

B. Trees 20. yards asunder.

C. Garden knot.

D. Kitchen garden.

E. Bridge.

F Conduit

G. Staires.

H. Walkes set with great woodthioke.

I. Walkes set with great wood round about your Orchard.

K. The onfence.

L. The out fence set with stone fruit.

M. Mount To force earth for a mount, or such like, set it round with quicke; and lay boughs of trees strangely intermingled, tops inward with the earth in the middle.

N. Still-house.

O. Good standing for Bees, if you haue an house.

P. If the River run by your doore, and vnder your mount it will be pleasant.



## CHAP. VI.

## Of Fences.

Effect of  
euill fen-  
ces.



**I**n your labour past and to come about an Orchard is lost vnlesse you fence well. It shall grieue you much to see your yong sets rubd lose at the roots, the barke pild, the boughs and twigs crompt, your fruit stolne, your trees broken, and all your many yeeres Labours and hopes destroyed, for want of Fences. A chiefe care must be had in this

point. You must therefore plant in such a soile, where you may prouide a conuenient, strong, and seemely fence. For you can possesse no goods, that haue so many enemies as an Orchard, look chapt. 13. Fruits are so delightfome, and desired of so many (nay, in a manner of all) and yet few will be at cost and take paines to prouide them. Fence well therefore, let your plot be wholly in your owne power, that you make all your fence your selfe: for Neighbours fencing is none at all, or very carelesse. Take heed of a doore or window (yea of a wall) of any other mans into your Orchard: yea, though it be nailed vp, or the wall be high, for perhaps they will prone theues.

Let the  
fence be  
your  
owne.

Kinds of  
fences.  
Earthen  
walls.

All Fences commonly are made of Earth, Stone, Wicke, Wood, or both earth and wood. Dry wall of earth, and dry Ditches, are the worst fences saue pales or railles, and doe waste the soonest, vnlesse they be well copt with gloue and mortar, whereon at Highill-tide it will be good to sow Wall-flowers, commonly called Bee-flowers, or winter Gilly-flowers, because they will grow (though amongst stones) and abide the strongest frost and drought, continually greene and flowering euen in Winter, and haue a pleasant smell, and are timely, (that is, they will floure the first and last of flowers) and are good for Bees. And your earthen wall is good for Bees dry and warme. But these fences are both vnseemely, euill to repaire, and onely for neede, where stone or wood cannot be had. Whosoener makes such Walls, must not pill the ground in the Orchard, for getting earth, nor make any pits or hollowes, which are both vnseemely and vnprofitable. Old dry earth mixt with sand is best for these.

This.



This kinde of wall will soon decay, by reason of the trees which grow nere it, for the roots and boales of great trees, will increase, undermine, and ouerturne such wals, though they were of stone, as is apparant by Ashes, Kountries, Burt-trees, and such like, carried in the chat, or berrie, by birds into stone wals.

Fences of Dead wood, as pales, will not last, neither will railes either last or make good fence. Pale and Raile.

Stone-wals (where stone may be had) are the best of this sort, both for fencing, lasting, and shrouding of your young trees. Stone wals.  
But about this must you bestow much paines and more cost, to haue them handsome, high and durable.

But of all other (in mine opinion) Quickwood, and Moats or Quicke Ditches of water, where the ground is leuell, is the best fence. wood & Moates.  
In vnequall grounds, which will not keepe water, there a double

ditch may be cast, made streight and leuell on the top, two yards broad for a faire walke, five or six foot higher then the soyle, with a gutter on either side, two yards wide, and foure feet depe set without, with three or foure chells of Thoznes, and within with Cherry, Plumme, Damson, Bullys, & liberos (for I loue these trees better for their fruit, and as well for their forme, as pinte) for you may make them take any forme. And in enery corner (and middle if you will) a mount would be raised, whereabout the wood may claspe, powdered with wood-bine: which will make with dressing a faire, pleasant, profitable, and sure fence. But you must be sure that your quicke thoznes either grow wholly, or that there be a supply betime, either with planting new, or plashing the old where want is. And assure your selfe, that neither wood, stone, earth, nor water, can make so strong a fence, as this after seven yeres growth.

Moats, Fish-ponds, and (especially at one side a River) with Moates, in and without your fence, will afford you fish, fence, and may-  
sure to your trees, and pleasure also, if they be so great and deep that you may haue swans, and other water birds, good for de-  
nouring of vermin, and a boat for many good uses.

It shall hardly auaile you to make any fence for your Orchard, if you be a niggard of your fruit. For as liberality will saue it best from noy some neighbours, liberality I say is the best fence, so iustice must restrain rioters. Thus when your ground is tempered, squared, and fenced, it is time to provide for planting.

CHAP.

## CHAP. VII.

## Of Sets.



There is not one point (in my opinion) about an Orchard more to be regarded, than the choice getting and setting of good plants, either for readinesse of having good fruit, or for continuall lasting. For whosoever shall faile in the choise of good Sets, or in getting, or gathering, or setting his Plants, shall never have a good or lasting

Orchard. And I take want of skill in this facultie to be a chiefe hinderance to the most Orchards, and to many for having of Orchards at all.

Slips.

Some for readinesse vse slips, which seldome take root: and if they doe take, they cannot last, both because their root having a maine wound will in short time decay the body of the tree: and besides that roots being so weakly put, are some nipt with drought or frost. I could neuer see (lightly) any slip but of Apples onely set for trees.

Bur-knot.

A bur-knot kindly taken from an Apple tree, is much better and surer. You must cut him close at the root end, an handfull under the knot, (some vse in summer about Lammastoe to circumsise him, and put earth to the knot with hay ropes, and in winter cut him off and set him, but this is curiosity, needlesse, and danger with remouing, and drought,) and cut away all his twigs saue one, the most principall, which in setting you must leaue aboue the earth, burying his trunk in the crust of the earth for his root. It matters not much what part of the bough the twig growes out of. If it grow out of or nere the root end, some say such an Apple will haue no coare nor kernell. Or if it please the Planter, he may let his bough be crooked, and leaue out his top end, one foot or somewhat more, wherein will be good grafting, if either you like not, or doubt the fruit of the bough (for commonly your Bur-knots are summer fruit) or if you thinke he will not, couer his wound safely.

Vnall Sets.

The most vnall kinde of Sets, is Plants with roots growing of kernels of Apples, Peares, and Crabs, or stones of Cherries, Plummes, &c. removed out of a Nursery, Wood, or other Orchard, into, and set in your Orchard in their due places.



I grant this kinde to be better than either of the former, by much, as more sure and more durable. Wherein you must note, that in sets so remoued, you get all the roots you can, and without buriſing of any; I utterly diſlike the opinion of thoſe great Gardiners, that ſollowing their bookes would haue the maine roots cut away, for tops cannot grow without roots. And be-  
 cause none can get all the roots, and remouall is an hindrance, you may not leaue on all tops, when you ſet them: For there is a proportion betwixt the top and root of a tree, each in the number (at leaſt) in the growth. If the roots be many, they will bring you many tops, if they be not hindered. And if you be to ſtewe or top your tree too much or too low, and leaue no liue, or little for ſap, (as is to be ſene in your hedges) it will hinder the growth of roots and boale, becauſe ſuch a kinde of ſtowing is a kinde of ſmothering, or choking the ſap. Great wood, as Oak, Elm, Aſhe, &c. being continually kept doſene, with ſerres, knives, axes, &c. neither boale nor root will thriue, but as an hedge or buſh. If you intend to graſſe in your Set, you may cut him cloſer with a greater wound, and nearer the earth, within a foot or two, becauſe the graft or grafts will coner his wound. If you like his fruit, and would haue him to be a tree of himſelfe, be not ſo bold: this I can tell you, that though you doe cut his top cloſe, and leaue nothing but his bulke, becauſe his roots are ſeu, if he be (but little) bigger than your thumb (as I wiſh all plants remoued to be) he will ſafely reouer his wound within ſeven yeeres; by good guidance that is: At the next time of dreſſing immediatly aboue his uppermoſt ſpiz, you cut him off aſlope cleanly, ſo that the ſpiz ſtand on the backe ſide, (and if you can Northward, that the wound may haue the benefit of Sunne) at the upper end of the wound: and let that ſpiz onely be the boale. And take this for a generall rule; Euery yong Plant, if he thriue, will reouer any wound aboue the earth, by good dreſſing, although it be to the one halfe, and to his very heart. This ſhort cutting at the remoue, ſaues your Plants from winde, and neede the leſſe or no ſtaying. I commend not Lying or Leaning Tying of Trees againſt Poles or Stayes; for it breeds obſtruction of Sap and wounds incurable. All remouing of Trees as great as your arm, or aboue, is dangerous: though ſome time

Maine  
roots cut.  
Stow  
sets re-  
moued.

2  
1000  
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Generall  
rule.

Tying of  
Trees.

Generall  
rule.

Signes  
of disca-  
ses. Cha.  
13.

time some such will grow, but not continue long: Because they be tainted with deadly wounds, either in the root or top. (And a tree once thoroughly tainted is neuer good.) And though they get some hold in the earth with some lesser talw, or talwes, which giue some nourishment to the body of the tree: yet the heart being tainted, he will hardly ener thriue; which you may easily discerne by the blacknesse of the boughs at the heart, when you dresse your trees. Also, when hee is set with more tops than the roots can nourish, the tops decaying, blacken the boughs, and the boughes the armes, and so the boale at the very heart. Or this taint in the remouall, if it kill not presently, but after some short time, it may be discerned by blacknesse or yelownesse in the barke, and a small hungred leafe. Or if your remoued plant put forth leaues the next and second Summer, and little or few sprayes, it is a great signe of a taint, and next yeeres death. I haue knowne a tree tainted in setting, yet grow, and bears blossomes for diuers yeeres: and yet for want of strength could neuer shape his fruit.

Suckers  
good  
sets.

Next vnto this, or rather equall with these Plants, are Suckers growing out of the roots of great Trees, which Cherries and Plums doe seldome or neuer want: and being taken kindly with their roots, will make very good Sets. And you may helpe them much by enlarging their roots with the talwes of the tree, whence you take them. They are of two sorts: Either growing from the very root of the tree: and here you must be carefull, not to hurt your tree when you gather them, by ripping amongst the roots; and that you take them cleane away: for these are a great and continuall annoyance to the growth of your tree: and they will hardly be cleansed. Secondly, or they doe arise from some talw: and these may be taken without danger, with long and good roots, and will some become Trees of strength.

A Run-  
ning  
Plant.

There is another way, which I haue not thoroughly proued, to get not onely Plants for graffing, but Sets to remaine for Trees, which I call a Running Plant: the manner of it is this: Take a root or kinnell, and put it into the middle of your plot, and the second yeere in the Spring, geld his top, if he haue one principall, (as commonly by nature they haue) and let him put forth onely foure Cyons toward the foure corners of the Orchard,



Orchard, as neere the earth as you can. If hee put not foure, (which is rare) flay his top till he haue put so many. When you haue such foure, cut the stocke aslope, as is aforesaid in this Chapter, haue aboue the vppermost sprig, and keep those foure without Cyons cleane and streight, till you haue them a yarde and an halfe, at least, or two yards long. When the next spring in grafting time, lay downe those foure sprales, towards the foure corners of your Orchard, with their tops in an heape of pure and good earth, raised (as high as the root of your Cyon, (so) say will not descend) and a sod to keepe them doونه, leauing niae or twelue inches of the top to looke vppward. In that hill he will put roots, and his top new Cyons, which you must spread as before, and so from hill to hill till he spread the compassse of your ground, or as farre as you list. If in bending, the Cyons cracke, the matter is small, cleanse the ground and he will recouer. Euery bended bough will put forth branches, and become Trees. If this Plant be of a burr knot, there is no doubt. I haue proued it in one branch my selfe: and I know at Wilton in Cleue-land a Pearre-tree of a great bulke and age, blowne close to the earth, hath put at euery knot roots into the earth, and from root to top, a great number of mighty armes of trees, filling a great roomth, like many trees, or a little Orchard. Much better may it be done by Art in a lesse Tree. And I could not mislike this kinde, save that the time will be long before it come to perfection.

Many vse to buy Sets already grafted, which is not the best way: for first, All remoues are dangerous: Again, there is danger in the carriage: Thirdly, it is a costly course of Planting: Fourthly, euery Gardiner is not trusty to sell you good fruit: Fifthly, you know not which is best, which is worst, and so may take most care about your worst trees. Lastly, this way keepes you from practise, and so from experience, in so good, Gentlemanly, Scholerlike, and profitable a Faculty.

The onely best way (in my opinion) to haue sure and lasting Sets, is neuer to remoue: for euery remoue is an hinderance, if not a dangerous hurt or deadly taint. This is the way: The Plot forme being laid, and the Plot appointed where you will plant euery Set in your Orchard, digge the roomth, where your Sets shall stand, a yarde compassse, how.

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Vnre-  
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and

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and make the earth mellow and cleane, and mingle it with a few coale ashes, to avoid wilzmes: and immediatly after the first change of the Mone, in the latter end of February, the earth being a fresh turned soer, put in every such roomth thre or foure kirkels of Apples or Peares, of the best: every kirkell in an hole made with your finger, finger-depe, a foot distant one from another: and that day Moneth following, as many moe, (lest some of the former misse) in the same compasse, but not in the same holes. Hence (God willing) shall you have roots enow. If they all, or divers of them come up, you may draw (but not dig) up (not put downe) at your pleasure, the next November. How many soener you take away, to give or bestow elsewhere, be sure to leave two of the proudest. And when in your second and third yeere you Graffe (if you Graffe then at all) leave the one of those two ingrafted, lest in grafting the other you faile: For I finde by tryall, that after first or second grafting in the same Stocke, being mist (for who hits all) the third misse puts your Stocke in deadly danger, for want of issue of sap. Yea, though you hit in grafting, yet may your graffes with winds or otherwise bee broken downe. If your graffes or graffe prosper, you have your desire, in a Plant unremoned, without taint, and the fruit at your owne choise, and so you may (some little earth being remoned) pull, but not digge up the other Plant or Plants in that roomth. If your graffe or Stocke, or both perish, you have another in the same place, of better strength to worke upon. For thzining without snub he will overlay your grafted Stocke much. And it is hardly possible to misse in grafting so often, if your Gardiner be worthy his name.

Sets vn-  
grafted  
best of  
all.

It shall not be amisse (as I iudge it) if your kirkels bee of choice fruit, and that you see them come forward prouly in their body, and beare a faire and broad leafe in colour, tending to a greenish yellow (which argues pleasant and great fruit) to try some of them ingrafted: for although it be a long time ere this come to beare fruit, ten or twelue peeres, or moe; and at their first bearing, the fruit will not seeme to be like his owne kinde: yet am I assured, upon triall, before twenty peeres growth, such Trees will increase the bignesse and goodnesse of their fruit, and come perfectly to their owne kinde. Trees (like other breeding crea,



creatures) as they grow in peeres, bignesse, and strength; so they mend their fruit. Husbands and Huswines finde this true by experience, in the rearing of their yong Stoze. More then this, there is no tree like this for soundnesse and durable last, if his keeping and dressing be answerable. I grant, the readiest way to come sone to fruit is grafting: because in a manner, all your Graftes are taken of fruit-bearing Trees.

Now when you have made choise of your Sets to remoue, the ground being ready, the best time is, immediatly after the fall of the Lease, in, or about the change of the Moone, when the sap is most quiet: for then the sap is in turning: for it makes no stay, but in the extremity of drought or cold. At any time in winter, may you transplant trees, so you put no Ice nor Snow to the root of your Plant in the setting: and therefore open, calme, and moist weather is best. To remoue, the lease being ready to fall, and not fallen, or buds apparantly put forth in a moist, warme season, for need, sometime may doe well: but the safest is to walke in the plaine trodden path.

Time of  
remo-  
uing.

Generall  
rule.

Some hold opinion that it is best remouing before the fall of the lease, & I heare it commonly so practised in the South by our best Arbozists, the lease not fallen: & they giue the reason to be, that the descending of the sap will make speedie roots. But mark the reasons following, and I think you shall find no soundnesse, either in that position or practise, at least in the reason.

1. I say, it is dangerous to remoue when the sap is not quiet, for euery remoue giues a maine checke to the stirring sap, by staying the course thereof in the body of your plant, as may appeare in trees remoued any time in Summer, they commonly die, nay hardly shall you save the life of the most yong and tender plant of any kind of wood (scarcely herbs) if you remoue them in the pride of sap. For proud sap vniuersally staid, by remouall, euer hinders, often faints, and so presently, or in verie short time kills. Sap is like blood in mans body, in which is the life, Chap. 3. pag. 8. If the blood vniuersally be cold, life is excluded; so is sap tainted by untimely remouall. A stay by drought, or cold, is not so dangerous (tho dangerous if it be extreme) because more naturall.

2. The sap neuer descends, as men suppose, but is consolidated and transubstantiated into the substance of the tree, and passeth

passeth (alwaies above the earth) byward, not onely betwixt the barke and the wood, but also into & in both body and barke, tho not so plentifully, as may appeare by a tree budding, nay fruit springing two or three years after he be circumcised, at the very root, like a miner that enlargeth his channell by a continuall descent.

3. I cannot perceiue what time they would haue the sap to descend. At Midsummer in a biting drought it staies, but descends not, for immediatly upon moisture it makes second shoots, at (or before rather) Michaeltide, when it shapens his buds for next years fruit. If at the fall of the leafe, I grant, about that time is y greatest stand (but not descent) of sap, which begins somewhat before the leafe fall, but not long, & therefore at that time must needs be the best removing, not by reason of the descent, but stay of sap.

4. The sap in his course hath his profitable and apparent effects, as the growth of the Tree, couering of wounds, putting of buds, &c. Whereupon it followes, if the sap descend, it must needs haue some effect to shew it.

5. Lastly, boughs plasht and laid lower than the root, die for want of sap descending, except where it is forced by the maine streame of the sap, as in top boughs hanging like water in pipes, or except the plasht bough lying on the ground put roots of his own, yea vnder boughs which we commonly call water-boughs, can scarcely get sap to liue, yea in time dye, because the sap doth presse so violently byward, and therefore the fairest shoots and fruit are alwaies in the top.

Obiect. If you say that many so removed thriue, I say that somewhat before the fall of the leafe (but not much) is the stand for the fall and the stand are not at one instant, before the stand is dangerous. But to returne.

Remoue  
soone.

The sooner in Winter you remoue your Sets, the better; the later the worse: for it is very perillous if a strong drought take your Sets before they haue made good their rooting. A plant set at the Fall, shall gaine (in a manner) a whole yeeres growth of that which is set in the Spring after.

The  
manner  
of set-  
ting.

I vse in the setting to be sure, that the earth be mouldy, (and somewhat moist) that it may run among the small tangles without straining or bzuising: and as I fill in earth to his root, I shake the Set easily to and fro, to make the earth settle the better to his roots: and withall easily with my foot I put in the earth close;



for ayre is noysome, and will follow concavities. Some prescribe Dats to be put in with the earth. I could like it, if I could know any reason thereof: and they vse to set their Plant with the same side toward the Sun: but this conceit is like the other. For first I would haue every tree to stand so free from shade, that not onely the root (which therfore you must keepe bare from grasse) but body, boughs, and branches, and every spray, may haue the benefit of Sun. And what hurt, if that part of the tree, that befoze was shadowed, be now made partaker of the heat of the Summe: In turning of Bees, I know it is hurtfull, because it changeth their entrance, passage, and whole worke: But not so in Trees.

Set as deepe as you can, so that in any wise you goe not beneath the crust. See Chap. 2.

We spake in the second Chapter of moysture in generall: but now especially hauing put your remoued plant into the earth, powze on water (of a puddle were good) by distilling presently, and so euery weeke twice in strong drought, so long as the earth will dzink, & refuse by ouerflowing. For moysture mollifies, and both giues leaue to the roots to spread, and makes the earth yelde sap and nourishment, with plenty and facility. Purles (they say) giue most and best milke after warme dzinkes. If your ground be such that it will keepe no moysture at the root of your plant, such plant shall neuer liue, or but for a time. There is nothing more hurtfull for yong trees than piercing drought. I haue known trees of good stature after they haue bene of diuers yers growth, and thriue well for a good time, perith for want of water, and very many by reason of taints in setting.

It is meet your sets and grafts be fenced, till they be as big as your arme, for feare of annoyances. Many wayes may sets receiue dammages, after they be set, whether they be grafted or ingrafted. For, although we suppose, that no noysome beast or other thing must haue access among your trees: yet by casuallty, a Dog, Cat, or such like, or your selfe, or negligent friend bearing you company, or a shrewd boy, may tread or fall vpon a yong and tender plant or graft. To auoid these and many such chances, you must stake them round a pretty distance from the set, neither so neere, nor so thicke, but that it may haue the benefit of Sunne, Raine, and Aire.

Set in  
the crust.  
Moyster  
good.

Grafts  
must be  
fenced.

Your stakes (small or great) would be so surely put, or driven into the earth, that they breake not, if any thing happen to leane upon them, else may the fall be more hurtfull, than the want of the fence. Let not your stakes shelter any weeds about your sets, for want of Sunne is a great hinderance. Let them stand so far off, that your grafts spreading receiue no hurt, either by rubbing on them, or of any other thing passing by. If your stock be long, and high grafted (which I much discommend (except in need) because there the sap is weake, and they are subiect to strong wind, and the lighting of birds) tie easily with a soft liff three or foure pricks vnder the clay, and let their tops stand above the grafts, to auoid the lighting of Crows, Pyes, &c. upon your grafts. If you sticke some sharpe thornes at the roots of your stakes, they will make hurtfull things keepe off the better. Other better fences for your grafts I know none. And thus much for Sets and Setting.

## CHAP. VIII.

*Of the distance of Trees.*

I know not to what end you should provide good ground, well fenced, and plant good sets; and when your trees should come to profit, haue all your labours lost, for want of due regard to the distance of placing of your trees. I haue seene manie trees stand so thicke, that one could not thine for the throng of his neighbours. If you doe marke it, you shall see the tops of trees rubb off, their sides galled like a galled horses backe, and manie trees haue more stumps then boughs, and most trees no wel thining, but short, stumpish, & euill thining boughs: like a Cozne-field ouer-seeded, or a towne ouer-peopled, or a pasture ouer-laid, which the Gardiner must either let grow, or leaue the tree verie few boughs to beare fruit. Hence small thrist, galls, wounds, diseases, and short life to the trees: and while they line greene, little, hard, worme-eaten, and euill thining fruit arise, to the discomfort of the owners.

**Remedy.** To preuent which discommoditie, one of the best remedies is, the sufficient and fit distance of trees. Therefore at the setting of your plants you must haue such a respect, that the distance of them



them be such, that euerie tree be not annoiance, but an helpe to his fellowes : for trees (as all other things of the same kinde) should shrowd, and not hurt one another. And assure your selfe Generall that euerie touch of trees (as well vnder as aboue the earth) is rule. hurtfull. Therefore this must be a generall rule in this Art: That All round no tree in an Orchard well ordered, nor bough, nor Cyp, drop ches hurt upon, or touch his fellowes. Let no man thinke this vnpossible, full. but looke in the eleventh chapter of dressing of trees. If they touch, the winde will cause a forcible rub. Young twigs are tender, if boughs or armes touch and rub, if they are strong, they make great galls. No kind of touch therefore in trees can be good.

Now it is to be considered what distance amongst Sets is requisite, and that must be gathered from the compasse and round that each tree by probability will take and fill. And herein I am of a contrarie opinion to all them, which practise or teach the planting of trees, that euer yet I knew, read, or heard of. For the common space between tree and tree is ten foot: if twentie foot, it is thought verie much. But I suppose twenty yards distance is small enough betwixt tree & tree, or rather too little. For the distance must needs be as far as two trees are wel able to ouerspread, and fill, so they touch not, by one yard at least. Now I am assured, and I know one Apple-tree, set of a slip finger-great, in the space of twentie yeeres (which I count a verie small part of a trees age, as is shewed Chapter 14.) hath spread his boughs eleven or twelue yards compasse, that is, five or six yards on every side. Hence I gather, that in forty or fiftie yeeres (which yet is but a small time of his age) a tree in good soile, well liking, by good dressing (for that is much auailable to this purpose) will spread double at the least, viz. twelue yards on a side, which being added to twelue allotted to his fellow, make twenty and foure yards, and so farre distant must euery tree stand from another. And looke how farre a tree spreads his boughs aboue, so far doth he put his roots vnder the earth, or rather further, if there be no stop, nor let by wals, trees, rocks, barren earth, and such like: for an huge bulk, and strong armes, massive boughs, many branches, and infinite twigs, require wide-spreading roots. The top hath the best aire to spread his boughs in, high and low, this way and that way: but the roots are kept in the crust of the earth, they may not goe downeward, nor upward

The best  
distance  
of trees.

Parts of  
a tree.

upward out of the earth, which is their element, no more than the Fish out of the Water, Camellion out of the Aire, nor Salamander out of the Fire. Therefore they must needs spread far vnder the earth. And I dare well say, if nature would giue leaue to man by Art, to dress the roots of trees, to take away the talues, and tangles, that lap and feet and grow superfluously and disorderly, (for every thing *sublunary* is cursed for mans sake) the tops aboue being answerably dressed, we should haue trees of wonderfull greatnesse, and infinite durance. And I perswade my selfe that this might be done sometimes in Winter, to trees standing in faire plaines and kindly earth, with small or no danger at all. So that I conclude, that twenty foure yards are the least space that Art can allot for trees to stand distant one from another.

Waste  
ground  
in an or-  
chard.

If you aske me what vse shall be made of that waste ground betwixt tree and tree: I answer: If you please to plant some tree or trees in that middle space, you may, and as your trees grow contiguous, great and thicke, you may at your pleasure take vp those last trees. And this I take to be the chiefe cause, why the most trees stand so thicke. For men not knowing (or not regarding) this secret of needfull distance, and louing fruit of trees planted to their hands) thinke much to pull vp any, though they pine one another. If you or your heires or successours would take vp some great trees (past setting) where they stand too thicke, be sure you doe it about Midsummer, and leaue no maine roots. I destinate this space of foure and twenty yards, for trees of age and stature. More than this, you haue borders to be made for walkes, with Roses, Berries, &c.

And chiefly consider: that your Orchard, for the first twenty or thirty yeeres, will serue you for many Gardens, for Saffron, Licorises, roots, and other herbs for profit, and flowers for pleasure: so that no ground need be wasted if the Gardiner be skillfull and diligent. But be sure you come not nere with such deepe deluing the roots of your trees, whose compasse you may partly discerne, by the compasse of the tops, if your top be well spread. And vnder the droppings and shadow of your trees, be sure no herbs will like. Let this be said for the distance of Trees.



## CHAP. IX.

*Of the Placing of Trees.*

**T**he placing of Trees in an Orchard is well worth the regard: For although it must be granted that any of our foresaid Trees (chap. 2.) will like well in any part of your Orchard, being good and well dressed earth: yet are not all Trees alike worthy of a good place. And therefore I wish that your Filberd, Plums, Damsons, Buleste, and such like, be utterly removed from the plaine soile of your Orchard into your fence: for there is not such fertilitye and easfull growth, as within: and there also they are more subiect, and can better abide the blasts of Eolus. The Cherries and Plums being ripe in the hot time of Summer, and the rest standing longer, are not so soon shaken as your better fruit: neither if they suffer losse, is your losse so great. Besides that, your fences and ditches will denoure some of your fruit growing in or nere your hedges. And seeing the continuance of all these (except Puts) is small, the care of them ought to be the lesse. And make no doubt, but the fences of a large Orchard will containe a sufficient number of such kind of Fruit-trees in the whole compasse. It is not materiall, but at your pleasure, in the said fences, you may either intermingle your severall kinds of fruit-trees, or set every kind by himselfe, which order doth very well become your better and greater fruit. Let therefore your Apples, Peares, and Quinces, possesse the soile of your Orchard; butesse you be especially affected to some of your other kinds: and of them let your greatest Trees of growth stand furthest from Sunne, and your Quinces at the South side or end, and your Apples in the middle, so shall none be any hindrance to his fellowes. The Warden-tree, and winter Pearre will challenge the preheminance for stature. Of your Apple-trees you shall finde difference in growth. A good Pippin will grow large, and a Costard tree: stead them on the North side of your other Apples, thus being placed, the least will give Sunne to the rest, and the greatest will shroud their fellowes. The fences and out-trees will guard all.



## CHAP. X.

## Of Grafting.

Of gra-  
ving or  
carving.

Grafting  
what.

A Grafte

Kinds of  
grafting.



Now are we come to the most curious point of our faculty: curious in conceit, but indeed as plaine and easie as the rest, when it is plainly shewne, which we commonly call Grafting, or (after some) Graffing. I cannot Erymologize, nor shew the originall of the word, except it come of grauing and carving. But the thing or matter is: The refozming of the Fruit of one Tree with the fruit of another, by an artificiall transplacing or transposing of a twig, bud or leafe, (commonly called a Graft) taken from one tree of the same, or some other kind, and placed or put to, or into another tree in due time and manner.

Of this there be diuers kinds, but three or foure now especially in vse: to wit, Grafting, incising, packing on, grafting in the scutcheon, or inoculating: whereof the chiefe and most vsuall, is called grafting (by the generall name, *Cataphexocem*: ) for it is the most knowne, surest, readiest, and plainest way to haue store of good fruit.



It is thus wrought: You must take a fine, thin, strong, and  
 sharpe Saw, made and armed for that purpose, cut off a  
 foot above the ground, or thereabouts, in a plaine without a  
 knot, or as neere as you can without a knot (for some  
 stocks will be knottie,) your stocke, set or plant, being sure-  
 ly staied with your foot and legge, or otherwise freight over-  
 thwart (for the stocke may be crooked) and then plaine his  
 wound smoothly with a sharpe knife: that done, cleane him  
 cleanly in the middle with a cleauer, and a knocke or mall, and  
 with a wedge of wood, Iron or Bone, two handfull long at least,  
 put into the middle of that cleft, with the same knocke, make  
 the wound gape a straw bredth wide, into which you must put  
 your Graftes.

Graft  
how.

The Graft is a top twig taken from some other Tree (for it  
 is folly to put a grafted into his owne stocke) beneath the upper-  
 most (and sometime in neere the second) knot, and with a sharpe  
 knife fitted in the knot (and sometime out of the knot when  
 neede is) with shoulders an ynch downeward, and so put into  
 the stocke with some thrusting (but not straining) barke to barke  
 inward.

Let your grafted haue three or foure eyes, for readinesse to put  
 forth, and giue issue to the sap. It is not amisse to cut off the  
 top of your grafted, and leaue it but five or six inches long, be-  
 cause commonly you shall see the tops of long grafted etc. The  
 reason is this. The sap in grafting receiues a rebuke, and  
 cannot worke so strongly presently, and your grafted receiue  
 not sap so readily, as the naturall branches. When your grafted  
 are cleanly and closely put in, and your wedge puld out nim-  
 bly, for feare of putting your grafted out of frame, take well  
 tempered mortar, somwhat wrought with chaffe or horse dung (for  
 the dung of cattell will grow hard, and straine your grafted) the  
 quantity of a Goses egge, and diuide it iust, and therewithall,  
 couer your stocke, laying the one halfe on the one side, and the o-  
 ther halfe on the other side of your grafted (for thrusting against  
 your grafted) you moue them, and let both your hands thrust at  
 once, and alike, & let your clay be tender, to yeld easily; and all,  
 lest you moue your grafted. Some vse to couer the cleft of the  
 stocke, vnder the clay with a peece of barke or leafe, some with  
 a leafe-cloth of waxe and butter, which as they be not much need-

Eyes.)

**Generall  
Rule.**

**Time of  
grafting.**

**Gathe-  
ring  
Graftes.**

**Graftes  
of old  
trees.**

fall, so they hurt not, but that by being busie about them, you moue your graftes from their places. They vse also mosse tyed on aboue the clay with some brier, wicker, or other bands. These profit nothing. They all put the graftes in danger, with pulling and thrusting: for I hold this generall rule in grafting, and planting: if your stocke and graftes take, and thine (for some will take and not thine, being tainted by some meanes in the planting or grafting) they will (without doubt) recover their wounds safely and shortly.

The best time of grafting from the time of removing your stocke is the next spring, for that saues a second wound, and a second repulse of sap, if your stocke be of sufficient bignesse to take a grafted as big as your thumbe, to as bigge as an arme of a man. You may grafted lesse (which I like) and bigger, which I like not so well. The best time of the yere is in the last part of February, or in March, or beginning of Aprill, when the Sunne with his heat beginnes to make the sap stirre more rankly, about the change of Maye before you see any great apparance of leafe or flowers, but onely knots and buds, and before they be proud, though it be sooner. Cherries, Peares, Appricocks, Quinces and Plummes would be gathered and grafted sooner.

The graftes may be gathered sooner in February, or any time within a moneth, or two before you grafted, or vpon the same day (which I commend.) If you get them any time before, for I haue knowne graftes gathered in December, and doe well, take heed of droughts. I haue my selfe taken a bur knot of a tree, and the same day when he was laid in the earth about mid February, gathered grafts and put in him, and one of those graftes bore the third yere after, and the fourth plentifully. Graftes of old trees would be gathered sooner than of yong trees, for they sooner breake and bud. If you keepe graftes in the earth, moisture with the heat of the Sunne will make them sprout as fast, as if they were growing on the tree. And therefore saving keeping is dangerous, the surest way (as I iudge) is to take them within a weeke of the time of your grafting.

The grafts would be taken not of the proudest twigs, for it may be your stocke is not answerable in strength. And therefore (say I) the grafts brought from South to vs in the North, although



although they take and thine (which is somewhat doubtfull, Where taken.  
 by reason of the difference of the Climate and carriage) yet shall they in time fashion themselves to our cold Northerne Soyle, in growth, taste, &c. For of the poorest, for want of strength may make them unready to receive sap (and who can tell but a poore graft is tainted) nor on the outside of your tree, for there should your tree spread but in the middell: for there you may be sure your Tree is no whit hindered in his growth or forme. He will still recover inward, more than you would wish. If your clay cleft in summer with drought, take well in the Chinkes for Emmits.  
 Emmits and Carewigs, for they are coming and close themselves, about grafts you shall finde them stirring in the morning or evening, and the rather in moist weather. I have had many young buds of Graftes, even in the flourishing, eaten with Ants. Let this suffice for grafting, which is in the faculty counted the chiefe secret, and because it is most usuall, it is best knowne.

Graftes are not to bee disliked for growth, till they wither, pine, and die. Usually before midsummer they breake, if they live. Some (but few) keeping proud and Greene, will not put till the second yeere, so is it to be thought of Sets.

The first shew of putting is no sure signe of growth, it is but the sap the graffe brought with him from his tree.

So soon as you see the graft put for growth, take away the clai, for then doth neither the stocke nor the graffe need it (put a little fresh well-tempered clai in the hole of the stocke) for the clai is now tender, and rather keeps moisture than drought.

Whether notes of changing the naturall fruit of Trees, are more curious than profitable, and therefore I minde not to bestow much labour or time about them, onely I shall make knowne what I have proved, and what I doe thinke.

And first of incising, which is the cutting of the barke of the Incising.  
 boale, a rine or branch of a tree at some bending or knee, shoul-  
 derwise with two gashes: onely with a sharpe knife to the  
 wood: then take a wedge, the bignesse of your graffe sharpe en-  
 ded, flat on the one side, agreeing with the tree, and round on the  
 other side, and with that being thrust in, raise your barke, almost  
you  
 then

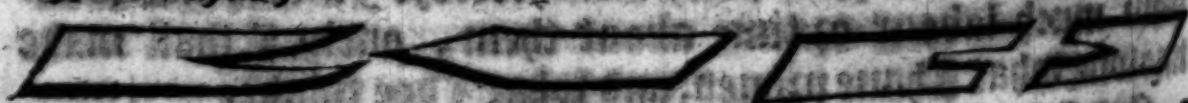
A great  
stocke.

then put in your grafted, fashioned like your wedge last: and lastly cover your wound, and fast it by, and take heed of straining. This will grow but to small purpose, for it is weake hold, and lightly it will be under growth. Thus may you graft betwixt the barke and the tre of a great stocke that will not easily be clifted: But I have tried a better way for great trees, viz. First, cut him off straight, and cleanse him with your knife, then cleave him into foure quarters, equally with a strong cleauer: then take for every Clift two or thre small (but hard) wedges last of the bignesse of your grafts, and with those Wedges driven in with an hammer open the foure clifts so wide (but no wider) that they may take your foure grafted, with thrusting, not with straining: and lastly, cover and clay it closely, and this is a sure and good way of grafting: or thus, clift your stocke by his edges twice or thrice with your cleauer, and open him with your wedge in every clift one by one, and put in your grafts, and then cover them. This may doe well.

Packing  
thus.

Packing on is, when you cut aslope a twig of the same bignesse with your graft, either in or besides the knot, two inches long, and make your graft agree iunpe with the Cypen, and gash your graft and your Cypen in the middell of the wound, lengthway, a straw breadth deepe, and thrust the one into the other, wound to wound, sap to sap, barke to barke, then tye them close and clay them. This may doe well. The fairest graft I have in my little Orchard, which I have planted, is thus packt on, and the branch whereon I put him, is his plentifull root.

To be short in this point, cut your graft in any sort of fashion, two inches long, and ioyne him cleanly and close to any other sprig of any tree in the latter end of the time of grafting, when sap is somewhat rise, and in all probability they will close and thine: thus,



The sprig. The graft. The twig. The graft.  
Or any other fashion you thinke good.

Inocula-  
ting.

Inoculating is an eye or bud, taken barke and all from one tree, and placed in the roome of another eye or bud of another, cut both of one compasse, and there bound. This must be done in Summer, when the sap is proud.



which line unto this is that, they call grafting in the scutchi-  
on. They differ thus: That here you must take an eye with  
his leafe, or (in mine opinion) a bud with his leaues. (Note that  
an eye is for a Cyon, a bud is for flowers and fruit,) and place  
them on another tree, in a plaine (for so they teach,) the place or  
barke where you must set it must be thus cut with a sharpe  
knife, and the barke raised with a wedge, and then the eye or bud put in and so  
bound vp. I cannot de-  
nie but such may grow.  
And your bud if he take  
will flower and beare fruit that yeere: as some grafts and sets  
also, being set for bloomes. If these two kindes thine, they  
reforme but a spray, and an vnder-growth. Thus you may  
place Roses on Thornes, and Cherries on Apples, and such like.  
Many write much more of grafting, but to small purpose.  
Whom we leaue to themselves, and their followers; and en-  
ding this secret we come in the next Chapter to a point of know-  
ledge most requisite in an Arbovist, as well for all other woods  
as for an Orchard.

Grafting  
in the  
Scutchi-  
on.

## CHAP. XI.

## Of the right dressing of Trees.



If all these things aforesaid were in Necessi-  
dred performed, as wee haue shewed tie of  
them in words, you should haue a per- dressing  
fect Orchard in nature and substance, trees, T  
began to your hand: And yet are all  
these things nothing, if you want that  
skill to dresse and keepe your trees.  
Such is the condition of all earthly  
things, whereby a man receiueth profit

or pleasure, that they degenerate presently without good orde-  
ring. Man himselfe left to himselfe, growes from his heavenly  
and spirituall generation, and becommeth beastly, yea diuellish  
to his owne kind, vlesse he be regenerate. No maruell then, if  
Trees make their shoots, and put their sprales disorderly.  
And truely (if I were worthy to iudge) there is not a mis-  
chiefe

growing  
in the  
orchard  
General  
Rule.

chiefe that breedeth greater and more generall harme to all the Orchard (especially if they be of any continuance) than ever I saw (I will not except three) than the want of the skillfull dressing of trees. It is a common and unskillfull opinion, and saying, Let all grow, and they will beare more fruit: and if you lop away superfluous boughs, they say, what a pittie is this: How many apples would these haue borne: not considering there may arise hurt to your Orchard, as well (nay rather) by abundance, as by want of wood. A sound and thriving plant in a good soyle, will ever yeeld too much wood, and disorderly, but neuer too little. So that a skillfull and painfull Arbozist, need neuer want matter to effect a plentiful and well drest Orchard: for it is an easie matter to take away superfluous boughs (if your Gardener haue skill to know them) whereof your plants will yeeld abundance, and skill will leaue sufficient well ordered. All ages both by rules and experience doe consent to a pruning and lopping of trees: yet haue not any that I know described vnto vs (except in darke and generall words) what or which are those superfluous boughs, which wee must take away, and that is the chiefe and most needfull point to be knowne in lopping. And wee may well assure our selues, (as in all other Arts, so in this) there is a vantage and dexterity, by skill, and an habit by practise out of experience, in the performance hereof for the profit of mankind; yet doe I not know (let me speake it with the patience of our cunning Arbozists) any thing within the compasse of humane affaires so necessary and so little regarded, not onely in Orchards, but also in all other timber trees, where or whatsoever.

Timber  
wood e-  
will drest.

How many Forests and Woods, wherein you shall haue for one liuely thriving tree, foure (nay sometimes twenty foure) euill thriving, rotten and dying trees, even while they liue: And in stead of trees thousands of bushes and shrubbes. What rottennesse? what hollownesse? what dead armes: withered tops: curtailed trunks: what loads of mosses: dying boughes: and dying branches shall you see euery where: And those that like in this sort are in a manner all vnprofitable boughes, cankered armes, crooked, little and short boales: what an infinite number of bushes, shrubs, and skrogs of hazels, thornes, and other profitable wood, which might be brought



brought by dressing to become great and goodly Trees. Consider now the cause: The lesser wood hath bene spoiled with carelesse, unskillfull, and untimely felling, and much also of the great wood. The greater Trees at the first rising have filled and over-loaden themselves with a number of wastfull boughs and suckers, which have not onely drawne the sappe from the boale, but also have made it knottie, and themselves and the boale mottie for want of dressing, whereas if in the prime of growth they had bene taken away close, all but one top (according to this pattern) and cleane by the bulke, the strength of all the sap should have gone to the bulke, and so he would have recovered and covered his knots, and have put forth a faire, long and straight body (as you see) for timber profitable, huge great of bulke, and of infinite last.

If all timber Trees were such (will some say) how should we have crowded wood for wheelles, carps, &c.



Imagine the root to be spread farre wider.

The cause of hurts in wood.

Profit of trees felled.

The end of trees.

Trees

Dresse timber Trees how.

Answe.

Ans. Dresse all you can, and there will be enough crooked  
for those use.

More than this, in most places, they grow so thicke, that nei-  
ther themselves, nor earth, nor any thing vnder or nere them  
can thine, nor sunne, nor raine, nor aire can doe them, nor any  
thing nere or vnder them any profit or comfort.

I see a number of Hags, where out of one root you shall see  
three or foure, (nay more) such as mens unskillfull greedinesse,  
who desiring many haue none good) pritty Dakes or Ashes,  
straight and tall, because the root at the first shoot gines  
sap amaine: but if one onely of them might be suffered to grow,  
and that well and cleanly pruned, all to his very top, what a  
Tree should wee haue in time? And wee see by those roots  
continually and plentifully springing, notwithstanding so  
deadly wounded, what a commodity should arise to the ow-  
ner, and the common wealth, if wood were cherished, and order-  
ly dressed.

Profit of  
trees  
dressed.

The waste boughs closely and skilfully taken away, would  
give vs store of fences and fetwell; and the bulke of the tree in  
time would grow of huge length and bignesse. But here (me  
thinks) I heare an unskillfull Arborist say, that trees haue their  
seuerall formes, even by nature: The Pearre, the Holly, the  
Aspe, &c. grow long in bulke with few and little armes. The  
Oke by nature broad, and such like. All this I grant: but grant  
me also, that there is a profitable end, and vse of every tree, from  
which if it decline (tho by nature) yet man by art may (nay must)  
correct it. Now other end of Trees I neuer could learne, than  
of trees. good timber, fruit much and good, and pleasure. Alas physical  
hinder nothing a good forme.

Trees

will take  
any  
forme.

Neither let any man ener so much as thinke, that it is impos-  
sible, much lesse vnpossible, to reforme any tree of what kinde  
soener. For (believe me) I haue tried it, I can bring any tree  
(beginning by time) to any forme. The Pearre and Holly may  
be made to spread, and the Oke to close.

But why doe I wander out of the compasse of mine Orchard  
into the Forrests and woods? Neither yet am I from my pur-  
pose, if boales of timber trees stand in need of all the sap, to  
make them great and freight (for strong growth and dressing  
make strong trees) then it must needs be profitable for fruit (a  
thing



thing moze immediately serving a mans need) to have all the sap his root can yeeld: for as timber sound, great and long, is the good of timber trees, and therefore they beare no fruit of worth: so fruit, good, sound, pleasant, great and much, is the end of fruitfull trees. That Gardener therefore shall performe his duty skillfully and faithfully, which shall so dresse his Trees, that they may beare such and such stoze of fruit, which he shall never doe (I dare undertake) unless he keepe this order in dressing his Trees.

The end  
of trees.

A fruit Tree so standing, that there need none other end of dressing but fruit (not ornaments for walkes, nor delight to such as would please their eye onely, and yet the best forme can not but both adorne & delight) must be parted from within two foot (or thereabouts) of the earth, so high to give liberty to dresse his root, and no higher, for drinking up the sap that should feed his fruit, for the boale will be first, and best served and fed, because he is next the root, and of greatest ware and substance, and that makes him longest of life, into two, three, or foure armes, as your stocke or grasses yeeld twigs, and every arme into two or moze branches, and every branch into his severall Cyons, still spzeading by equal degrees, so that his lowest spray be hardly without the reach of a mans hand, and his highest be not past two yards higher, rarely (especially in the midst) that no one twig touch his fellow. Let him spread as far as he list without any master-bough, or top equally. And when any bough both grow sadder and fall lower, than his fellowes (as they will with weight of fruit) ease him the next spring of his superfluous twigs, and he will rise: when any bough or spray shall amount above the rest; either snub his top with a nip betwixt your finger and your thumb, or with a sharpe knife, and take him cleane away, and so you may use any Cyon you would reforme, and as your tree shall grow in stature and strength, so let him rise with his tops, but slowly, and early, especially in the midst, and equally, and in breadth also, and follow him upward with lopping his under-growth and water-boughs, keeping the same distance of two yards, but not above three in any wise, betwixt the lowest and highest twigs.

Benefits  
of good  
dressing.

1 Thus shall you have well liking, cleane skind, healthfull, great, and long-lasting trees.

2 Thus shall your Tree grow low, and safe from winds, for his top will be great, broad and weighty.

3 Thus growing broad, shall your trees beare much fruit (I here say) one as much as five of your common trees, and good without shadowing, dropping, and fretting: for his boughs, branches, and twigs shall be many, and these are they (not the bole) which beare the fruit.

4 Thus shall your bole being little (not small but low) by reason of his shortnesse, take little, and yeeld much sap to the fruit.

5 Thus your Trees by reason of strength in time of setting shall put forth more blossomes, and more fruit, being free from taints; for strength is a great helpe to bring forth much and safely, whereas weaknesse failes in setting though the season be calme.

Some use to bare Trees roots in winter, to stay the setting till better seasons, which I discommend, because

1 They hurt the roots.

2 It stales it nothing at all.

3 Though it did, being but small, with us in the North, they have their part of our Aprill and Maies frosts.

4 Hindrance cannot profit weak trees in the setting.

5 They waste much labour.

6 Thus shall your tree be easie to dresse, and without danger, either to the tree or the dresser.

7 Thus may you safely and easily gather your fruit without falling, bruising or breaking of Cyons.

This is the best forme of a fruit-tree, which I have here only shadowed out for the better capacity of them that are led more with the eye, than the mind, craving pardon for the deformity, because I am nothing skillfull either in painting or carving.

Imagine that the paper makes but one side of the Tree to appeare, the whole round compasse will give leane for many more armes, boughs, branches and Cyons.



The perfect forme of a fruit tree.



If any thinke a tre cannot well be brought to this forme:  
*Experto crede Roberto.* I can shew diuers of them under twenty  
 yeeres of age.

The fittest time of the yere for prouning is as of grafting, Time  
 when the sap is ready to stirre (not proudly stirring) and so to best for  
 couer the wound, and of the yere, a moneth before (or at least proi-  
 when) you graffe. Dresse Peares, Apples, Peaches, Che- ning.  
 ries, and Bullys sooner. And old trees before young plants,  
 you may dresse at any time betwixt leafe and leafe. And  
 note, that where you take any thing away, the sap the next  
 summer will be putting: be sure therefore when he puts a bud  
 in any place where you would not haue him, rub it off with your  
 finger.

And heere you must remember the common homely Pro- Dresse  
 uerbe: Soone crookes the tree that good Camrell must bee. become.  
 Beginne betime with trees, and doe what you list: but if  
 you let them grow great and stubborne, you must doe as the  
 trees list. They will not bend but breake, nor be wound with-  
 out danger. A small branch will become a bough, and a bough  
 an arme in bignesse. When if you cut him, his wound will se-  
 ster, and hardly, without good skill, recover: therefore, obsta-  
 ple.

Faults of principijs. Of such wounds, and lesser, as any bough cut off a euil drest handfull or more from the body, comes hollownesse, and in trees, & timely death. And therfore when you cut, strike close, and cleane, there- and upwards, and leane no bunch.

medic.

The forme altered.

This forme in some cases sometimes may be altered: If your tree, or trees, stand neere your Walkes, if it please your fancie more, let him not breake, till his boale be aboue your head: so may you walke vnder your trees at your pleasure. Or if you set your fruit trees for your shades in your Groves, then I respect not the forme of the tree, but the comelinesse of the walke.

Dressing of old trees.

Faults are five, & their remedies

All this hitherto spoken of dressing, must be vnderstood of yong plants, to be formed: it is next somewhat be said for the instruction of them that haue old trees already formed, or rather deformed: for, *malum non vitatur nisi cognitum* The faults there- fore of a disordered tree, I finde to be five: 1. An vnprofitable boale: 2. Waterboughs: 3. Fretters: 4. Suckers: and 5. The principall top.

1. Long boale.

A long boale asketh much feeding, and the more he hath the more he desires, and gets (as a drunken man drinke, or a covetous man wealth) and the lesse remaines for the fruit, he puts his boughs into the aire, and makes them, the fruit, and it selfe more dangered with winds: for this I know no remedy, after that the tree is come to growth, once euill, neuer good.

No re- medic.

2. Water boughs.

Water boughs, or vndergrowth, are such boughs as grow low vnder others and are by them ouergrowne, ouershadowed, dropped on, and pinde for want of plenty of sap, and by that meanes in time die: For the sap presseth upward, and it is like water in her course, where it findeth most issue, thither it floweth, leaving the other lesser sucres dry: even as wealth to wealth, and much to more. These so long as they beare, they beare lesse, worse, and fewer fruit, and waterish.

Remedy

The remedy is easie, if they be not growne greater than your arme. Chop them close & cleane, & cover the middle of the wound, the next summer when he is dry, with a salve made of tallow, tar, & a very little pitch, good for the couering of any such wound of a great tree: vntill it be barke-pild, and then a sear-cloth of fresh Butter, Honey, and Wine, presently (while the wound is greene) applyed, is a soveraigne remedy in summer especially. Some bind such wounds with a thumbe rope of Hay, moist, and rub with Dreg.

Barke- pild, and the re- medic.

Fret.



3. **Freeters** are, when as by the negligence of the Gardener, two, or more parts of the tree, or of diuers trees, as armes, boughs, branches, or twigs, grow so nere and close together, that one of them by rubbing, doth wound another. This fault of all other shewes the want of skill, or care (at least) in the Arbovist: for here the hurt is apparant, and the remedy easie, scene to betime: galls and wounds incurable, but by taking away those members: for let them grow, and they will be worse and worse, and so kill themselves with ciuill strife for rooth, and danger the whole tree. Aoid them betime therfore, as a common-wealth doth bo some enemies.

4. **Suckers** A Sucker is a long, proud, and disorderly Cyon, growing streight vp (for pride of sap makes proud, longe streight growth) out of any lower parts of the tree, receiuing a great part of the sap, and bearing no fruit, till it haue tyrannized ouer the whole tree: These are like idle and great Drones amongst Bees; and proud and idle members in a common-wealth.

The remedy of this is, as of water-boughs, vlesse he be growne greater, then all the rest of the boughs, and then your Gardener (at your discretion) may leaue him for his boale, and take away all, or the most of the rest. If he be little, slip him, and set him, perhaps he will take: my fairest Apple-tree was such a Slip.

5. **One principall top or bough and remedy.** One or two principall top boughs are as euill, in a manner, as Suckers, they rise of the same cause, and receiue the same remedy: yet these are more tolerable, because these beare fruit, yea the best: but Suckers of long doe not beare.

I know not how your tree should be faulty, if you reforme all your vices timely, and orderly. As these rules serue for dressing young trees and sets in the first planting: so may they well serue to helpe old trees, though not exactly to rector them.

The Instruments fittest for all these purposes, are most commonly, For the great Trees an handsome, long, light Ladder of Kirpoles, a little, nimble, and strong armed Saw, and sharpe. For lesse Trees, a little and sharpe Hatchet, a broad mouthed Chisell, strong and sharpe, with an handle, your strong and sharpe Cleauer, with a knock, and (which is a most necessary Instrument amongst little Trees) a great hasted and sharpe Knife or Whittle. And as needfall is a Stole.

Stole on the top of a Ladder of eight or more rounds, with the back set, whereon you may safely and easelully stand to grasse, to drie, and to gather fruit, thus formed: The set may be fast wedged in: but the Ladder must hang loose, with two bands of iron. And thus much of dressing trees for fruit, formally to profit.



## CHAP. XII.

*Of Foyling.*

Necessi-  
ty of foy-  
ling.



There is one thing yet very necessary for to make your Orchard both better, and more lasting: yea, so necessary, that without it your Orchard cannot last, nor prosper long, which is neglected generally both in precepts and in practise, viz. manuring with Foyle: whereby it hapneth that when trees (amongst other evils) through want of fatnesse to feede them, become mossie, and in their growth are euill (or not) thriuing, it is either attributed to some wrong cause, as age (when indeed they are but yong) or euill standing (stand they neuer so well) or such like, or else the cause is altogether vnknowne, and so not amended.

Trees  
great  
suckers.

Great  
bodies.

Can there be denied any way by nature, or art, sooner or sounder to seeke out, and take away the heart and strength of earth, than by great trees? Such great bodies cannot be sustained without great store of sap. What living body haue you greater than of trees? The great Sea-monsters (whereof one came a land at Teesmouth in Yorkshire, hard by vs, 18. yards in length, and nere so much in compasse) seeme hideous, huge, strange, and monstrous, because they be indeed great: but especially, because they are seldome seene: But a tree liking, come to his growth and age, twice that length, and of a bulke neuer so great, besides his other parts, is not admired, because he is so commonly seene. And I doubt not, but if he were well regarded from his birth, by succeeding ages, to his full strength, the most of them would double their measure. About fifty yeeres agoe I heard by credible and constant report, That in Brooham Parke in West-moze-land, nere vnto Penrich, there lay a blowne



blowne Dake, whose Trunke was so bigge, that two Horsemen being the one on the one side, and the other on the other side, they could not one see another: to which if you adde his armes, boughs, and roots, and consider of his bignesse, what would he have bene, if preserved to the bantage: Also I read in the History of the West-Indians, out of Peter Martyr, That sixtē men taking hands one with another, were not able to fathome one of those trees about. Now Nature hauing giuen to such a faculty by large and infinite roots, talues and tangles, to draw immediatly his sustenance from our common mother the Earth (which is like in this point to all other mothers that beare) hath also ordained that the Tree over-laden with fruit, and wanting sap to feed all she hath brought forth, will waine all she cannot feed, like a woman bringing forth more children at once then she hath teats. See you not how Trees especially, by kind being great, standing so thicke and close, that they cannot get plenty of sap, pine away all the grasse, weeds, lesser shrubs, and trees, yea and themselves also for want of vigo: of sap: So that trees growing large, sucking the soyle whereon they stand, continually, and amaine, and the fertility of the earth that feeds them decaying (for what is there that wastes continually, that shall not haue end?) must either haue supply of sucken, or else leaue thriving and growing. Some grounds will beare Corne while they be new, and no longer, because their crust is shallow, and not very good, and lying high they scind and wash, and become barren. The ordinary Corne soiles continue not fertill, without following and foyling, and the best requires supply, even for the little body of Corne. Now then can we thinke that any ground (how good soeuer) can sustaine bodies of such greatnesse, and such great feeding, without great plenty of disparising from good earth: This is one of the chiefe causes, why so many of our Orchards in England are so ill thriving when they come to growth, and our fruit so bad. Men are loth to bestow much ground, and desire much fruit, and will neither set their trees in sufficient compassse, nor yet feed them with manure. Therefore of necessity Orchards must be soiled.

The fittest time is, when your Trees are growne great, and haue nere hand spread your earth, wanting new earth to sustaine

Time fit  
for foy-  
ling.

Kind of  
foyle.

sustaine them, which if they do, they will seeke abroad for better earth, and shun that which is barren, (if they find better) as cattell euill pasturing. For nature hath taught every creature to desire and seeke his owne good, and to auoid hurt. The best time of the yeere is at the Fall, that the Frost may bite and make it tender, and the Raine wash it into the roots. The Summer time is perillous if ye dig, because the sap stirs againe. The best kinde of Foyle is such as is fat, hot, and tender. Your earth must be but lightly opened, that the dung may goe in, and wash away; and but shallow, lest you hurt the roots: & in the spring, closely and equally made plaine againe for feare of Duckers. I could wish, that after my Trees haue fully possessed the foyle of mine Orchard, that every seven yeeres at least, the foyle were bespread with dung halfe a foot thicke at least. Duddle water out of the dunghill powzed on plentifully, will not onely moisten but fatten especially in June and July. If it be thicke and fat and applied every yeere, your Orchard shall need none other foiling. Your ground may lye so low at the River side, that the flood standing some daies and nights thereon, shall save you all this labour of foiling.

### CHAP. XIII.

#### Of Annoyances.



Two  
kinds of  
euils in  
an Or-  
chard.

Chiefe helpe to make every thing good, is to auoid the euils thereof: You shall neuer attaine to that good of your Orchard you looke for, vntill you haue a Gardener, that can discern the diseases of your trees, and other annoyances of your Orchard, and find out the causes thereof, and know and apply fit remedies for the same. For be your ground, site, plants, and trees as you would wish, if they be wasted with hurtfull things, what haue you gained but your labour for your trauell? It is with an Orchard and every tree, as with mans body. The best part of physicke for preservation of health, is to foresee and cure diseases.

All the diseases of an Orchard are of two sorts, either internal or external. I call those inward hurts which breed on and in particular trees.



1 Gals.

5 Barke bound.

2 Canker.

6 Barke pild.

3 Mousse.

7 Worme.

4 Weaknes in setting.

8 Deadly wounds.

Gals, Canker, Mousse, weaknesse, though they be diuers diseases: yet (howsoever Authoꝝ thinke otherwise) they rise all out of the same cause.

Gals we haue described with their cause and remedy, in the Gals.  
1. Chapter vnder the name of fretters.

Canker is the consumption of any part of the tree, barke and wood, which also in the same place is deciphered vnder the title of water-boughs. Canker.

Mousse is sensibly scene and knowne of all, the cause is pointed out in the same Chap. in the discourse of Timber-wood, and partly also the remedy: But for Mousse adde this, That at any time in summer (the Spring is best) when the cause is remoued, with an Hairecloth, immediatly after a shower of raine, rub off your Mousse, or with a peece of wood (if the Mousse abound) formed like a great knife. Mousse.

Weaknesse in the setting of your fruit shall you find there also in the same Chapter, and his remedy. All these flow from the want of warmth in good soile, wrong planting, Chap. 7. and euill or no dressing. Weake  
nesse in-  
setting.

Barke bound (as I thinke) riseth of the same cause, and the best, and present remedy (the causes being taken away) is with your sharpe knife in the Spring, length-way to lanch his barke throughout, on thre or foure sides of his boale. Barke-  
bound.

The disease called the Worme is thus discerned: The barke will be hoald in diuers places like gal, the wood wil die & dry, and you shall see easily the barke swell. It is verily to be thought, that therein is bred some worme. I haue not yet thorowly sought it out, because I was neuer troubled therewithal: but only haue scene such trees in diuers places. I thinke it a worme rather, because I see this disease in trees, bringing fruit of sweet taste, & the swelling shewes as much. The remedy (as I coniecture) is so some as you perceine the wound, the next spring cut it out bark and all, & apply Cowes pisse & vinegar presently, and so twise or thrice a weeke for a Moneths space: For I well perceine, if you suffer it any time, it eats the tree or bough round, & so kills. Worme.  
Remedy  
Since



Since I first wrote this Treatise, I have changed my mind concerning the disease called the *worme*, because I read in the History of the West-Indians, that their trees are not troubled with the disease called the *worme* or *canker*, which ariseth of a raw and euill concocted humo<sup>r</sup> or sap. witnesse Pliny, by reason their Country is more hot then ours, whereof I thinke the best remedy is (not disallowing the former, considering that the *worme* may breed by such an humo<sup>r</sup>) warme standing, sound lopping, and good dressing.

Bark-  
pilde.  
Wounds.

Bark-pild you shall find with his remedy in the 11. Chapter. Deadly wounds are when a mans Arbo<sup>r</sup>ist wanting skill, cuts off armes, boughs or branches an inch, or (as I see sometimes) an handfull, or halfe a foot or more from the body. These so cut cannot couer in any time with sap, and therefore they die, and dying they perissh the heart, and so the tree becomes hollow, and with such a deadly wound cannot liue long.

Remedy

The remedy is, if you find him befoze he be perished, cut him close, as in the 11. Chapter: if he be hoald, cut him close, fill his wound, tho neuer so deepe, with mo<sup>r</sup>ter well tempered, and so close at the top his wound with a Seare-cloth doubled and nailed on, that no aire nor raine approach his wound. If he be not very old, and detaining, he will recouer, and the hole being closed, his wound within shall not hurt him fo<sup>r</sup> many yeeres.

Hurts  
on trees.  
Ants,  
Earwigs,  
Cater-  
pillars,  
and such  
like  
wormes.

Hurts on your trees are chiefly Ants, Earwigs, and Caterpillars. Of Ants and Earwigs is said Chap. 10. Let there be no swarme of Pismires neere your Tree root, no not in your Orchard, turne them ouer in a frost, and poure in water, and you kill them.

For Caterpillars, the vigilant Fruturer shall sone espy their lodging by their Web, or the decay of leaues eaten round about them. And being seene, they are easily destroyed with your hand, or rather (if your tree may spare it) take spig and all (fo<sup>r</sup> the red peckled butter-flye doth euer put them, being her sparm, among the tender spraes fo<sup>r</sup> better feeding, especially in drought) and tread them vnder your feet. I like nothing of smoke among my trees. Unnaturall heats are nothing good fo<sup>r</sup> natural trees. This fo<sup>r</sup> diseases of particular trees.

External  
aills.

Externall hurts are either things naturall or artificiall. Natural things, externally hurting Orchards.

1 Beasts



- |           |            |          |              |
|-----------|------------|----------|--------------|
| 1 Beasts. | 1 Deere.   | 2 Birds. | 1 Bulfinch.  |
|           | 2 Goates.  |          | 2 Thrush.    |
|           | 3 Sheepe.  |          | 3 Blackbird. |
|           | 4 Hare.    |          | 4 Crow.      |
|           | 5 Cony.    |          | 5 Pye.       |
|           | 6 Cattell. |          |              |
|           | 7 Horse.   | ec.      |              |

The other things are,

- 1 Winds.
- 2 Cold.
- 3 Trees.
- 4 Weeds.
- 5 Wormes.
- 6 Mowles.
- 7 Filth.
- 8 Poysonfull smoke.

Externall wilfull euils are these:

- 1 Walls.
- 2 Trenches.
- 3 Other works noysome done in or neere your Orchard.
- 4 Euill Neighbours.
- 5 A carelesse Master.
- 6 An vndiscreet, negligent, or no keeper.

See you not here an whole Army of mischiefes banded in troupes against the most fruitfull trees the earth beares: assailing your good labours. Good things haue most enemies.

A skilfull Fruiterer must put to his helping hand, and dis- Remedy  
band and put them to flight.

Foz the first ranke of beasts, besides your out-strong fence, Deere,  
you must haue a faire and swift Greyhound, a Stone-bow, Gun &c.  
and if neede require, an Apple with an hooke foz a Deere, and an  
Hare-pipe foz an Hare.

Your Cherries and other Berries when they be ripe, will draw Birds.  
all the Black-birds, Thrushes and Maw-pies to your Orchard.  
The Bul-finch is a deuourer of your Fruit in the Bud, I haue  
had whole trees shald out with them in Winter-time.

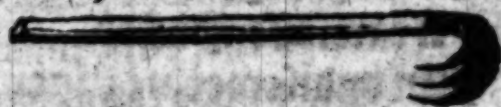
The best remedy here is a Stone-bow, a Piece, especially if Remedy  
you haue a Musket or Spar-hawke in Winter to make the  
Black-bird stoop into a bush or hedge.

The Gardener must cleanse his soile of all other Trees: but Other  
fruit trees.

fruit trees aforesaid Chapter 2. for which it is ordained, and I would especially name Dakes, Elmes, Ashes, and such other great wood, but that I doubt it should be taken as an admission of lesser trees: for I admit of nothing to grow in mine Orchard but Fruit and Flowers. If Sap can hardly be good to feed our Fruit-trees, why should wee allow of any other, especially those, that will become their Masters, and wrong them in their livelihood?

And although we admit without the fence, of Walnuts in most plaine places, Trees middle-most, and Ashes or Dakes, or Elmes utmost, set in comely rowes equally distant with faire Allies twixt row and row to avoid the boisterous blasts of winds, and within them also others for Bees; yet we admit none of this into your Orchard-plat: other remedy then this have we none against the nipping frosts.

Weeds. Weeds in a fertile soile (because the generall curse is so) till your Trees grow great, will be noysome, and deforme your allies, walkes, beds, and squares, your vnder Gardners must labour to keepe all cleanly and handsome from them, and all other filth with a Spade, weeding-kniues, rake with iron teeth: a skrapple of iron thus formed,



For Pettles and ground-Jay after a showre.

Remedy When weeds, straw, stiches, and all other scrapings are gathered together, burne them not, but bury them vnder your crust in any place of your Orchard, and they will dye and fatten your ground.

Wormes Moles. Wormes and Moles open the earth, and let in aire to the roots of your Trees, and deforme your squares & walkes, & feeding in the earth, being in number infinite, draw on barrennes.

Remedy Wormes may easily be destroyed. Any summer evening when it is darke, after a showre with a Candle, you may fill bushels, but you must tread nimbly. And where you cannot come to catch them so; sift the earth with coale ashes an inch or two thicknes, and that is a plague to them, so is sharpe gravell.

Moles will anger you, if your Gardener or some skilfull Mole-ratcher ease you not, especially having made their sottrelles among the roots of your trees: you must watch her well with a



hole-speare, at moone, none, and night, when you see her utmost hill, cast a trench betwixt her and her home (for she hath a principall mansion to dwell and breed in about April, which you may discern by a principall hill, wherein you may catch her, if you trench it round and sure, and watch well) or wheresoever you can discern a single passage (for such she hath) there trench, and watch, and have her.

Willfull annoyances must be prevented & avoided by the love of the Master and Fruterer, which they beare to their Orchard.

Justice and liberality will put away euill neighbours or euill neighbourhood. And then (if God blesse and giue successe to your labours) I see not what hurt your Orchard can sustaine.

Willfull  
annoy-  
ances.  
Remedy

## CHAP. XIII.

### *Of the age of Trees.*



It is to be considered: All this Treatise of trees tends to this end, that men may love & plant Orchards, whereunto there cannot be a better inducement then that they know (or at least be perswaded) that all that benefit they shall reape thereby, whether of pleasure or profit, shall not be for a day or a moneth, or one, or

many (but many hundred) yeeres. Of good things the greatest, and most durable is alwaies the best. If therefore out of reason grounded vpon experience, it be made (I thinke) manifest, but I am sure probable, that a fruit-tree in such a soile and site, as is described, so planted and trimmed & kept, as is afore appointed and duly soiled, shall dure 1000. yeeres, why should we not take paines, and be at two or three yeeres charges (for vnder seven yeeres will an Orchard be perfected for the first planting, and in that time be brought to fruit) to reape such a commodity, and so long lasting?

Let no man thinke this to be strange, but peruse and consider the reason. I haue Apple-trees standing in my little Orchard, which I haue knowne these forty yeeres, whose age before my time I cannot learne, it is beyond memory, tho I haue enquired of diuers aged men of 80. yeeres and upwards: these trees although come into my possession very euill orde-

The age  
of trees.

Gathered  
by  
reason  
out of ex-  
perience

red,

red, mishapen, and one of them wounded to his heart, and that deadly (for I know it will be his death) with a wound, wherein I might have put my foot in the heart of his bulke (now it is lesse) notwithstanding, with that small regard they have had since, they so like, that I assure my selfe they are not come to their growth by more than two parts of three, which I discern not onely by their owne growth, but also by comparing them with the bulke of other trees. And I find them short (at least) by so many parts in bignesse, although I know those other fruit trees to have bene much hindered in their stature by evill guiding. Wherehence I gather thus.

Parts of  
a Trees  
age.

If my trees be a hundred yeeres old, and yet want two hundred of their growth before they leave encreasing, which make three hundred, then we must needs resolve, that this three hundred yeeres are but the third part of a Trees life, because (as all things living besides) so Trees must have allowed them for their encrease one third, another third for their stand, and a third part of time also for their decay. All which time of a Tree amounts to nine hundred yeeres, three hundred for increase, three hundred for his stand, whereof we have the frame stature, and three hundred for his decay, and yet I thinke (for we must coniecture by comparing, because no one man liveth to see the full age of Trees) I am within the compasse of his age, supposing alwaies the foresaid meanes of preserving his life. Consider the age of other living creatures. The Horse and miled Ore wrought to an untimely death, yet double the time of their increase. A Dog likewise increaseth three, stands three at least, and in as many (or rather more) decays. Every living thing bestowes the least part of his age in his growth, and so must it needs be with Trees. A man comes not to his full growth and strength (by common estimation) before thirty yeeres, and some slender and cleane bodies, not till forty, so long also stands his strength, and so long also must hee have allowed by course of nature to decay. Ever supposing that he be well kept with necessaries, and from and without straines, bruises, and all other dominating diseases. I will not say upon true report, that Physicke holds it possible, that a cleane body kept by these three Doctors, Doctor Dyer, Doctor Quiet, and Doctor Meriman, may live neere a hundred yeeres. Neither

Mans  
age.



Neither will I here bage the long yeeres of Methuselah, and those men of that time, because you will say, those dayes are shortned since the flood. But what hath shortned them? God for mans sinnes: but by meanes, as want of knowledge, euill government, riot, gluttony, drunkennes, and (to be short) the encrease of the curse, our sinnes increasing in an iron and wicked age.

Now if a man, whose body is nothing (in a manner) but tender rottenesse, whose course of life cannot by any meanes, by counsell, restraint of lawes, or punishment, nor hope of praise, profit, or eternall glory, be kept within any bounds, who is degenerate cleane from his naturall seeding, to effeminate nicenesse, and cloying his body with excess of meat, drinke, sleepe, &c. and to whom nothing is so pleasant and so much desired as the causes of his owne death, as idlenesse, lust, &c. may live to that age: I see not but a tree of a solide substance, not damaged by heate or cold, capable of, and subiect to any kinde of ordering or dressing, that a man shall apply vnto him, feeding naturally, as from the beginning disburdened of all superfluties, eased of, and of his owne accord avoiding the causes that may annoy him, should double the life of a man, more than twice told; and yet naturall philosophy, and the vniuersall consent of all Histories tell vs, that many other living creatures farre exceed man in the length of yeeres: As the Hart and the Raven. Thus reporteth that famous Roterodam out of Heliodorus, and many other Historiographers. The testimony of Cicero in his booke De Senectute, is weighty to this purpose: that we must in posteritas retia ferere arbores, which can haue none other sence: but that our fruit trees, whereof he speaks, can endure for many ages.

What else are trees in comparison with the earth, but as haire to the body of man? And it is certaine, without poisoning, euill and distemperate dyet, and blage, or other such forcible cause, the haire dure with the body. What they be called excrements, it is by reason of their superfluous growth: (for cut them as often as you list, and they will still come to their naturall length.) not in respect of their substance and nature. Haires endure long, and are an ornament and life also to the body, as trees to the earth.

The age of  
trees

Age of trees  
continued

General  
Rule

So that I resolve by good reason, that fruit-trees well ordered, may live and like a thousand yeeres, and beare fruit, and the longer, the more, the greater, and the better, because his vigour is proud and stronger, when his yeeres are many: You shall see old trees put their buds and blossomes both sooner and more plentifully than yong trees by much. And I sensibly perceive my yong trees to enlarge their fruit, as they grow greater, both for number, and greatnesse. Yong Beesfers bring not forth Calves so saire, neither are they so plentifull to milke, as when they become old Kine. No good Housewife will breed of a yong but an old bird-mother: It is so in all things naturally, therefore in trees.

The age of  
timber trees.

And if fruit-trees last to this age, how many ages is it to be supposed, strong and huge timber trees will last: whose huge bodies, require the yeeres of diuers Methushalahs, before they end their daies, whose Sap is strong & bitter, whose Bark is hard and thicke, and their substance solid & stiffe: all which are defences of health and long life. Their strength withstands all forcible winds, their sap of that quality is not subiect to wormes and tainting. Their barke receiues seldome or neuer by casualty any wound, and not onely so, but he is free from removals, which are the death of millions of trees, whereas the fruit tree in comparison is little, and often blowne downe, his sap sweet, easily, and soon tainted, his barke tender, and soon wounded, and himselfe vsed by man, as man vseth himselfe, that is, either unskillfully, or carelessly.

Age of trees  
discerned.

It is good for some purposes to regard the age of your fruit trees, which you may easily know, till they come to accomplish twenty yeeres, by his knots: reckon from his roots by an arme, and so to his top-twig, & every yeeres growth is distinguished from other by a knot, except lopping or removing doe hinder.

## CHAP. XV

### Of gathering and keeping Fruit.

Generall  
Rule.

**A**lthough it be an easie matter, when God shall send it, to gather and keepe fruit, yet are they certaine things worthy your regard. You must gather your fruit when it is ripe, and not before, else will it wither and be tough and sowre. All fruit generally are ripe, when they begin to fall.



fall. For Trees doe as all other bearers doe, when their pong ones are ripe, they will waime them. The Dove her Pigeons, the Cony her Rabbits, and women their children. Some fruit tree sometimes getting a taint in the setting with a frost or e- uill winde, will cast his fruit untimely, but not befoze he leane giuing them sap, or they leane growing. Except from this foze- said rule, Cherries, Damsons, and Bullies. The Cherry is Cherries, ripe when he is sweld wholly red, and sweet: Damsons and &c. Bullies not befoze the first frost.

Apples are knowne to be ripe, partly by their colour, grow- Apples. ing towards a yelloiw, except the Leather-coat and some Peares and Greenings.

Timely Summer fruit will be ready, some at Midsummer, When. most at Lammas for present vse; but generally no keeping fruit befoze Michael-tide. Hard Winter fruit and Wardens longer.

Gather at the full of the Moone for keeping, gather dry, for Dry stalkes. feare of rotting.

Gather the stalkes withall: for a little wound in fruit, is deadly: but not the stumpe, that must beare the next fruit, nor leaves, for moisture putrifies.

Gather every kind severally by it selfe, for all will not keepe Severally. alike, and it is hard to discerne them, when they are mingled.

If your trees be over-laden (as they will be, being ordered, as is befoze taught you) I like better of pulling some off (tho they be not ripe) nere the top end of the bough, then of prop- Overladen trees. ping by much, the rest shall be better fed. Propping puts the bough in danger, and frets it at least.

Instruments: A long Ladder of light Firre: A stole-ladder Instruments. as in the 11. Chap. A gathering Apronlike a poake befoze you, made of purple, or a Wallet hung on a bough, or a basket with a flue bottome, or skin bottome, with Lathes or splinters vnder, hung in a rope to pull by and drawe: bywise none, every Bruises. bywise is to fruit death: if you doe, vse them presently. An hooke to pull boughs to you is necessary, breake no boughs.

For keeping, lay them in a dry Loft, the longest keeping Keeping. Apples first and furthest on dry straw, on heapes ten or foure- tene dayes, thich, that they may sweat. When dry them with a soft and cleane cloath, and lay them thin abroad. Long keeping fruit

fruit would be turned once in a moneth softly: but not in no  
immediatly after frost. In a loft coner well with straw, but ra-  
ther with chaffe or bran: for frost doth cause tender rottennes.

## CHAP. XVI. Of Profits.

**N**ow pause with your selfe, and view the end of all your  
labours in an Orchard: unspeakable pleasure, and infi-  
nite commodity. The pleasure of an Orchard I refer to the last  
Chapter for the conclusion: and in this Chapter, a word or two  
of the profit, which thoroughly to declare is past my skill: and I  
count it as if a man should attempt to adde light to the Sunne  
with a Candle, or number the Stars. No man that hath but a  
meane Orchard or iudgement but knowes, that the commodity  
of an Orchard is great: Neither would I speake of this, being  
a thing so manifest to all; but that I see, that through the care-  
lesse lazinesse of men, it is a thing generally neglected. But let  
them know, that they lose hereby the chiefest good which be-  
longs to housekeeping.

Compare the commodity that cometh of halfe an acre of  
ground, set with fruit trees and hearbs, so as is prescribed, and  
a whole Acre (say it be two) with Corne, or the best commo-  
dity you can wish, and the Orchard shall exceed by diuers  
degrees.

Cydar and  
Perry.

In France and some other Countries, and in England, they  
make great vse of Cydar and Perry thus made: Dresse every  
Apple, the stalk, upper end, and all galls away: Stamp them,  
and straine them, and within 24. houres tanne them vp into  
cleane, sweet, and sound vessels, for feare of euill ayre, which  
they will readily take: and if you hang a poake full of Cloues,  
Gace, Nutmegs, Cinamon, Ginger, and pills of Lemmons in  
the midst of the vessel, it will make it as wholesome and plea-  
sant as wine. The like usage both Perry require. These drinks  
are very wholesome, they coole, purge, and preuent hot Agues.  
But I leaue this skill to Physicians.

Fruit.

The benefit of your Fruit, Roots and Hearbs, though it  
were but to eat and sell, is much.

Waters.

Waters distilled of Roses, Woodbine, Angelica, are both  
profitable and wondrous pleasant, and comfortable.

Saffron



Saffron and Lycopas will yeld you much Conserues and preserves, are ornaments to your Feasts, health in your sicknesse, and a good helpe to your friend, and to your purse.

Conserues.

He that will not be moued with such vnspeakable profits, is well worthy to want, when others abound in plenty of good things.

## CHAP. XVII.

## Ornaments.

**M**e thinks hitherto we haue but a bare Orchard for fruit, and but halfe good, so long as it wants those comely Ornaments, that should giue beauty to all our labours, and make much for the honest delight of the owner and his friends.

For it is not to be doubted: but as God hath giuen man things profitable, so hath he allowed him honest comfort, delight, and recreation in all the works of his hands. I say, all his labours vnder the Sunne without this are troubles, and vexation of minde: For what is greedy gaine, without delight, but moynling, and turnsoyling in slavery? But comfortable delight, with content, is the good of every thing, and the patterne of heauen. A morsell of bread with comfort, is better by much than a fat Ore with vnquietnesse. And who can deny, but the principall end of an Orchard, is the honest delight of one wearied with the works of his lawfull calling: The very works of, and in an Orchard & Garden, are better than the ease and rest of and from other labours. When God had made man after his owne Image, in a perfect state, and would haue him to represent himselfe in authority, tranquillity, and pleasure vpon the earth, he placed him in Paradise. What was Paradise, but a Garden and Orchard of trees and herbes, full of all pleasure: & nothing there but delights. The gods of the earth, resembling the great God of heauen in authority, power, and abundance of all things, wherein is their most delight. And whither do they withdraw themselves from the troublesome assayes of their estate, being tyed with the hearing and iudging of litigious Controversies, choaked (as it were) with the close ayres of their sumptuous buildings, their stomacks cloyed with variety of Banquets, their eares filled & overburthened with tedious discourtesies?

Delight the chiefe end of Orchards.

An Orchard delightfome.

An Orchard is paradise.

Causes of wearisomenesse.

whither

Orchard is  
the remedy.

Whither : but into their Orchards : made and prepared, dressed and destinated for that purpose, to renue and refresh their senses, and to call home their over-wearied spirits. Nay, it is (no doubt) a comfort to them, to set open their Casements into a most delicate Garden and Orchard, whereby they may not onely see that, wherein they are so much delighted, but also to giue fresh, sweet, and pleasant ayze to their Galleries and Chambers.

All delight  
in Orchards.

And looke, what these men doe by reason of their greatnesse and ability, prouoked with delight, the same doubtlesse would euery of vs doe, if power were answerable to our desires, wherby we shew manifestly, that of al other delights on earth, they that are taken by Orchards, are most excellent, and most agreeing with nature.

This delights all the  
sences.

For whereas euery other pleasure commonly fills some one of our senses, and that onely, with delight, this makes all our senses swim in pleasure, and that with infinite variety, ioyned with no lesse commodity.

Delighteth  
old age.

That famous Philosopher, and mat:blesse Orator, M. T. C. prescribeth nothing more fit, to take away the tediousnesse and heauy load of thre or foure score yeeres, than the pleasure of an Orchard.

Causes of  
delight in an  
Orchard.

What can your eye desire to see, your eares to heare, your mouth to taste, or your nose to smell, that is not to be had in an Orchard, with abundance and variety : What more delight-some than an infinite variety of sweet smelling flowers : decking with sundry colours, the greene mantle of the Earth, the vniuersall Mother of vs all, so by them bespotted, so dyed, that all the world cannot sample them, and wherein it is more fit to admire the Dyer, than imitate his workmanship. Colouring not onely the earth, but decking the ayze, and sweetning euery breath and spirit.

Flowers.

The Rose red, damaske, beluet, and double double prouince Rose, the sweet muske Rose double and single, the double and single white Rose. The faire and sweet senting Madbine, double and single, and double double. Purple Cowslips, and double Cowslips, and double double Cowslips. Primrose double and single. The Violet nothing behinde the best, for smelling sweetly. And 1000. more will prouoke your content.



And all these, by the skill of your Gardiner, so comely, and Borders and  
orderly placed in your Borders and Squares, and so intermin- Squares.  
gled, that none looking thereon, cannot but wonder, to see, what  
Nature corrected by Art can doe.

When you behold in diuers corners of your Orchard Mounts.  
Mounts of Stone, or wood curiously wrought within and with. Whence you  
out, or of earth covered with Fruit-trees: Kentish Cherry, may shoot a  
Damsons, Plums, &c. With Staires of precious workman- Bucke.  
ship. And in some corner (or mo) a true Dyall or Clocke, and Dyall.  
some Anticke works, and especially siluer-sounding Musique, Musique.  
mirt Instruments and voices, gracing all the rest: How will  
you be rapt with delight?

Large Walks, broad & long, close and open, like the Tempe Walkes.  
groves in Thessalic, raised with gravel and sand, having seats Seats.  
and banks of Camomile, all this delights the minde, & brings  
health to the body.

View now with delight the works of your own hands, your Order of  
fruit trees of all sorts, loaden with sweet blossomes, and fruit trees.  
of all tastes, operations, and colours: your trees standing in  
comely order which way soeuer you looke.

Your borders on euery side hanging and drooping with Fe-  
berries, Raspberries, Barberies, Currants, and the roots of  
your trees powdered with Strawberries, red, white, and  
greene: what a pleasure is this? Your Gardiner can frame  
your lesser wood to the shape of men armed in the field, ready Shape of  
to giue battell: or swift running Greyhounds: or of well sen- men and  
ted and true running Hounds, to chase the Deere, or hunt the beasts.  
Hare. This kinde of hunting shall not waste your corne, nor  
much your coine.

Mazes well framed a mans height, may perhaps make your Mazers-  
friend wander in gathering of berries, till he cannot recouer  
himselſe without your helpe.

To haue occasion to exercise within your Orchard, it shall Bowle  
be a pleasure to haue a Bowling-Alley, or rather (which is Alley.  
more manly, and more healthfull) a paire of Bats to stretch Bats.  
your armes.

Rosemary and Sweet Eglantine are seemely ornaments a- Hearbs.  
bout a Dore or Window, so is Woodbine.  
Like Chap. 5. and you shall see the forme of a Con- Conduit.  
duit.

Riuer.

Moats.

Bees.

Vine.

Birds.

Nigh-  
t-gale.Robin-red-  
breast.

Wren.

Black-bird,  
Thrush.

duit. If there were two or more, it were not amiss.  
 And in mine opinion, I could highly commend your Or-  
 chard, if either thou wilt it, or hard by it there should run a plea-  
 sant Riuer with siluer streames: you might sit in your Mount,  
 and angle a peckled Trout, or sleighty Cele, or some other  
 Fish. Or Moats, whereon you might row with a Boat, and  
 fish with Nets.  
 Store of Bees in a dry and warme Bee-house, comely made  
 of firboards, to sing, and sit, and feed upon your flowers and  
 sprouts, make a pleasant noyse and sight. For cleanly and in-  
 nocent Bees, of all other things, loue and become, and thriue  
 in an Orchard. If they thriue (as they must needs, if your  
 Gardiner be skilfull, and loue them, for they loue their friends,  
 and hate none but their enemies) they will, besides the plea-  
 sure, yeld great profit, to pay him his wages. Yea, the increase  
 of twenty Stocks or Stoles, with other fees, will keepe your  
 Orchard. You need not doubt their stings, for they hurt not  
 whom they know, and they know their keeper and acquaint-  
 tance. If you like not to come amongst them, you need not  
 doubt them: for but nere their store, and in their owne de-  
 fence, they will not fight, and in that case onely (and who can  
 blame them?) they are manly, and fight desperately. Some (as  
 that Honourable Lady at Hacknes, whose name doth much  
 grace mine Orchard) vse to make seats for them in the Stone  
 wall of their Orchard, or Garden, which is good, but wood is  
 better.  
 A Vine ouer shadowing a seat, is very comely, though her  
 Grapes with vs ripe slowly.  
 One chiefe grace that adorns an Orchard, I cannot let slip:  
 A brood of Nighingales, who with their senerall notes and  
 tunes, with a strong delightfome voice, out of a weake body,  
 will beare you company night and day. She loues (and lues  
 in) hots of woods in her heart. She will helpe you to cleanse  
 your trees of Caterpillers, and all noisome wormes and flies.  
 The gentle Robin-red breast will helpe her, and in Winter in  
 the coldest stormes will keepe a part. Neither will the silly  
 Wren be behinde in Summer, with her distinct whistle (like  
 a sweet Recorder) to cheere your spirits.  
 The Black-bird and Thrush (for I take it the Thrush sings  
 not,



not, but deuotes) sing loudly in a May morning, and delights the eare much (and you need not want their company, if you haue ripe Cherries or Berries, and would as gladly as the rest doe you pleasure:) But I had rather want their companie than my fruit.

What shall I say? 1000. of delights are in an Orchard: and sooner shall I be weary, then I can reckon the least part of that pleasure, which one that hath and loues an Orchard, may finde therein.

What is there of all these few that I haue reckoned, which doth not please the eye, the eare, the smell, and taste? And by these senses, as Organes, Pipes, and Windows, these delights are carried to refresh the gentle, generous, and noble minde.

To conclude, what toy may you haue, that you liuing to such an age, shall see the blessings of God on your labours while you liue, and leane behinde you to your heires or successors (for God will make heires) such a worke, that many ages after your death, shall recozd your loue to your Country? And the rather, when you consider (Chap. 14.) to what length of time your worke is like to last.

Your  
owne la-  
bour.

---

FINIS.

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# THE COUNTRY HOUSEWIVES GARDEN:

*Containing Rules for Herbs and Seeds of  
common use, with their times and seasons,  
when to set and sow them.*

*Together*

*With the Husbandry of Bees, published with  
secrets very necessary for every Housewife.*

*As also diuers new Knots for Gardens.*

*The Contents see at large in the last Page.*

---

GEN. 2. 29.

*I haue giuen vnto you euery Herbe, and euery tree, that shall be  
to you for meat.*



London printed for Francis Williams. 1626.

# THE GOVERNMENT HOUSEWIVES

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A. Johnston now living in London.

The Contents are at large in the last Page.



London printed for Francis & Thomas. 1646.





# THE COUNTRY HOWSWIFES GARDEN.

## CHAP. I.

### The Soyle.



The soyle of an Orchard and Garden, differ onely in these three points: First, the Gardens soyle would be somewhat dryer, Dry. because hearbs being more tender than trees, can neither abide moisture nor drought, in such excessive measure, as trees; & therfore hauing a dryer soyle, the remedy is easie against drought, if

need be: water soundly, which may be done with smal labour, the compasse of a Garden being nothing so great, as of an Orchard, and this is the cause (if they know it) that Gardiners raise their squares: but if moisture trouble you, I see no remedy without a general danger, except in Hops, which delight much in a low and sappy earth.

Secondly, the soyle of a Garden would be plaine and leuell, Plaine. at least euery square (for we suppose the square to be the fittest forme.) The reason: the earth of a Garden wanting such helps, as should stay the water, which an Orchard hath, and the roots of hearbs being short, and not able to fetch their liquor from the bottome, are more annoyed by drought, and the soyle being mellow and loose, is some either washt away, or sends out his heart by too much drenching and washing.

Thirdly, if a garden soyle be not cleere of weeds, and namely,

of grasse, the herbs shall neuer thriue: for how should good herbs prosper, when euill weeds were so fast: considering good herbs are tender in respect of euill weeds: these being strengthened by nature, and the other by art: Gardens haue small place in comparison, and therefore may the more easily be fallowed, at the least one halfe yeere before, and the better dressed after it is framed. And you shall finde that cleane keeping doth not onely auoid danger of gathering weeds, but also is a speciall ornament, and leaues more plentifull sap for your tender herbs.

GARDEN  
C H A P. II.

*Of the Site.*

**I** Cannot see in any sort, how the site of the one should not be good, and fit for the other: The ends of both being one, good, wholesome, and much fruit ioyned with delight, vntill trees be more able to abide the nipping frosts than tender herbs: but I am sure the flowers of trees are as soone perished with cold, as any herbe except Pansies, and Pelons.

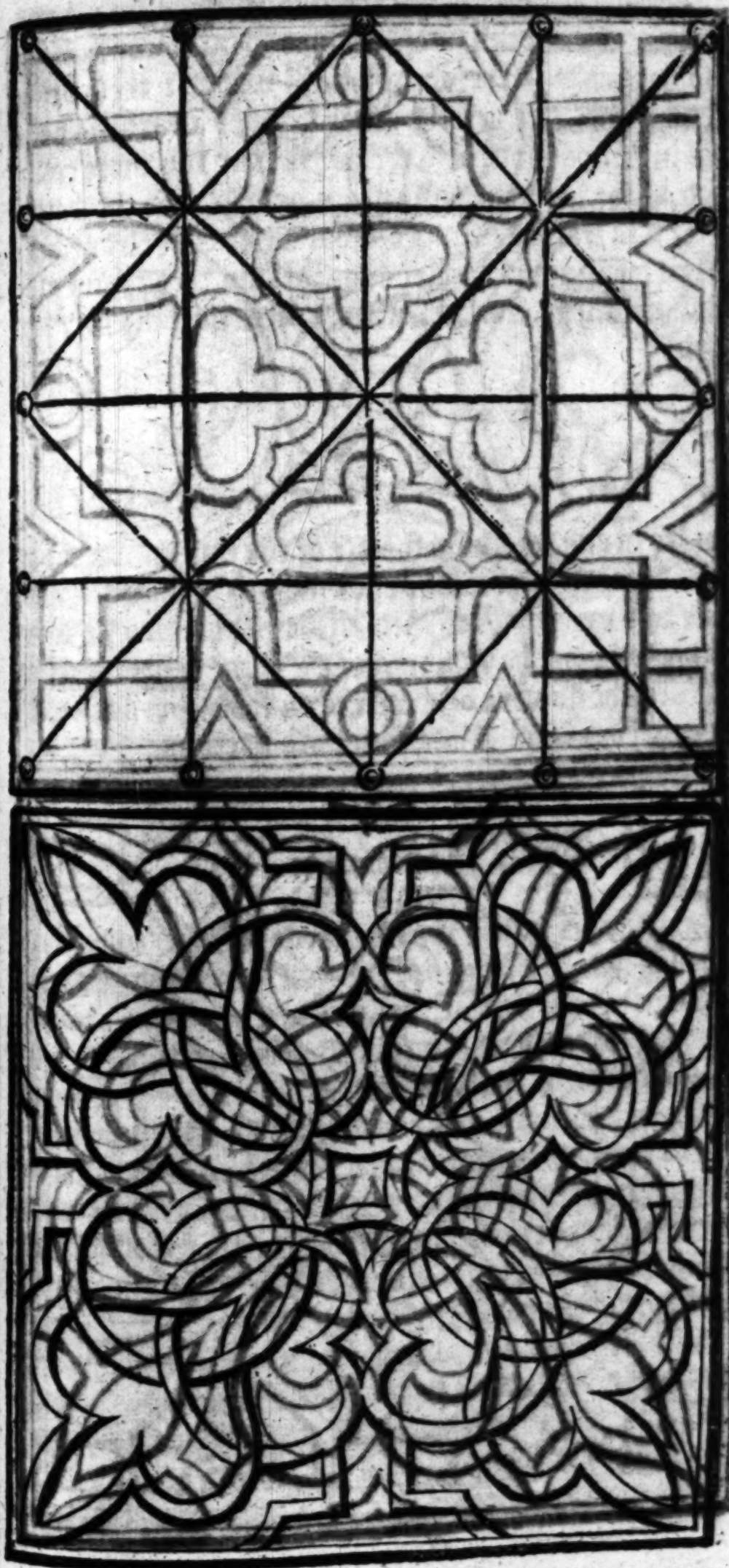
C H A P. III.

*Of the Forme.*

**E**t that which is said in the Orchards forme, suffice for a Garden in generall: but for speciall formes in squares, they are as many, as there are beulces in Cat diuers braines. Neither is the wit and art of a skilfull Gardiner in this point not to be commended, that can worke more variety for breeding of more delightfull choise, and of all those things, where the owner is able and desirous to be satisfied. The number of formes, spaces and knots is so great, and men are so directly delighted, that I leaue every Housewife to her selfe, especially feeling to set downe many, had bene but to fill much paper: yet lest I deprive her of all delight and direction, let her view these few choise, ne to formes, and note this generally, that all plots are square, and all are bozord about with pinks, Mar- tins, Feaberries, Roses, Thyme, Rosemary, Ber flowers, & top, sage, or such like.

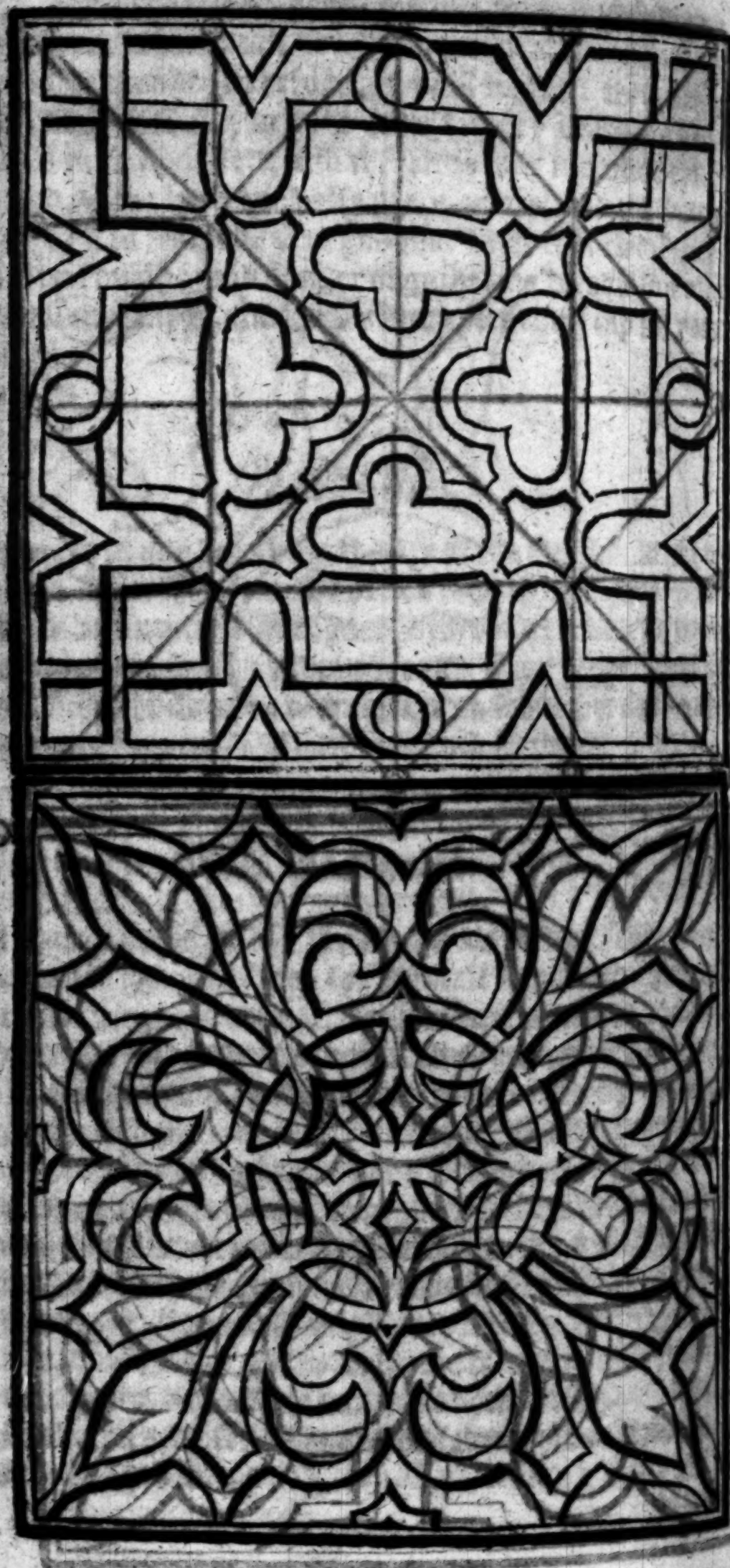


The ground  
plot for  
Knots.



Carte de  
Cinqtoys  
plot

Flower  
deluce  
The  
blor  
Know



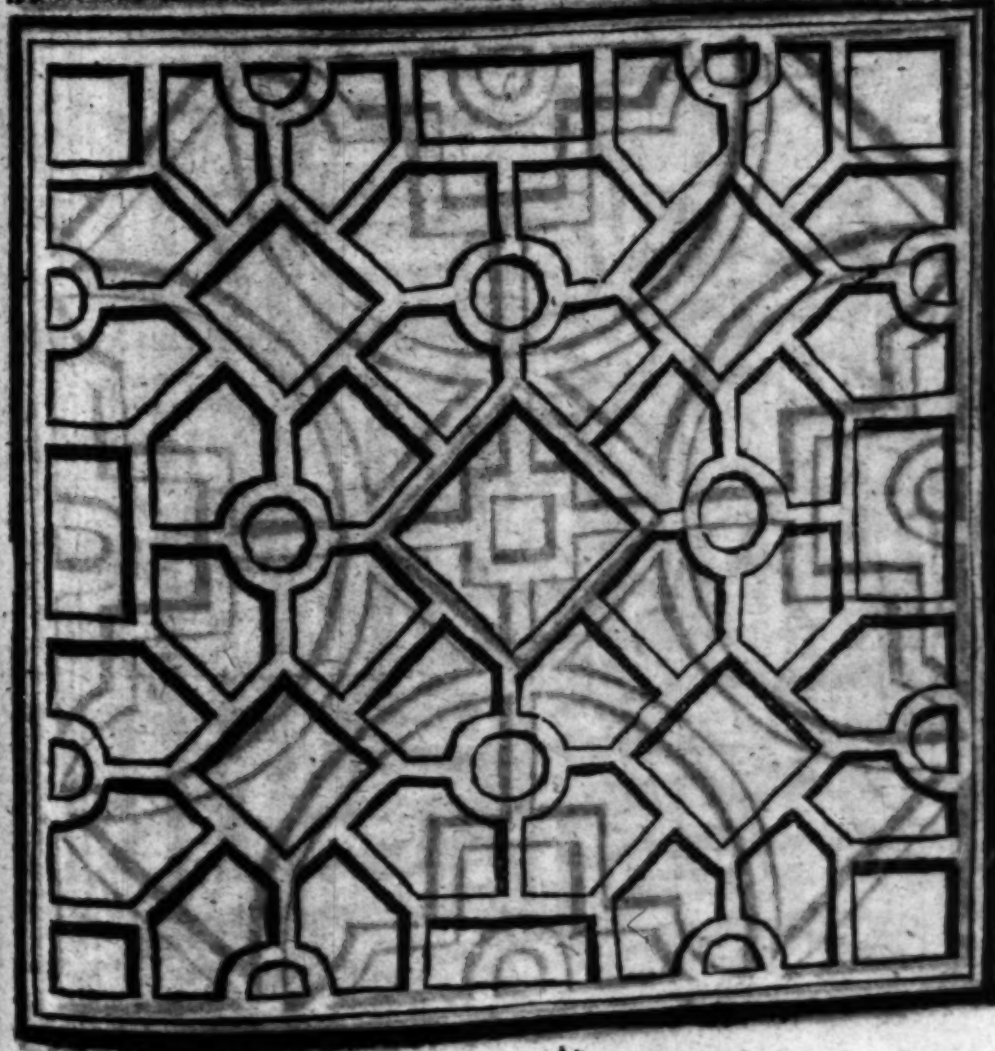
The Tre-  
foyle



The Fret.



Lozenges.



Crosse-  
bowe.



Diamond.

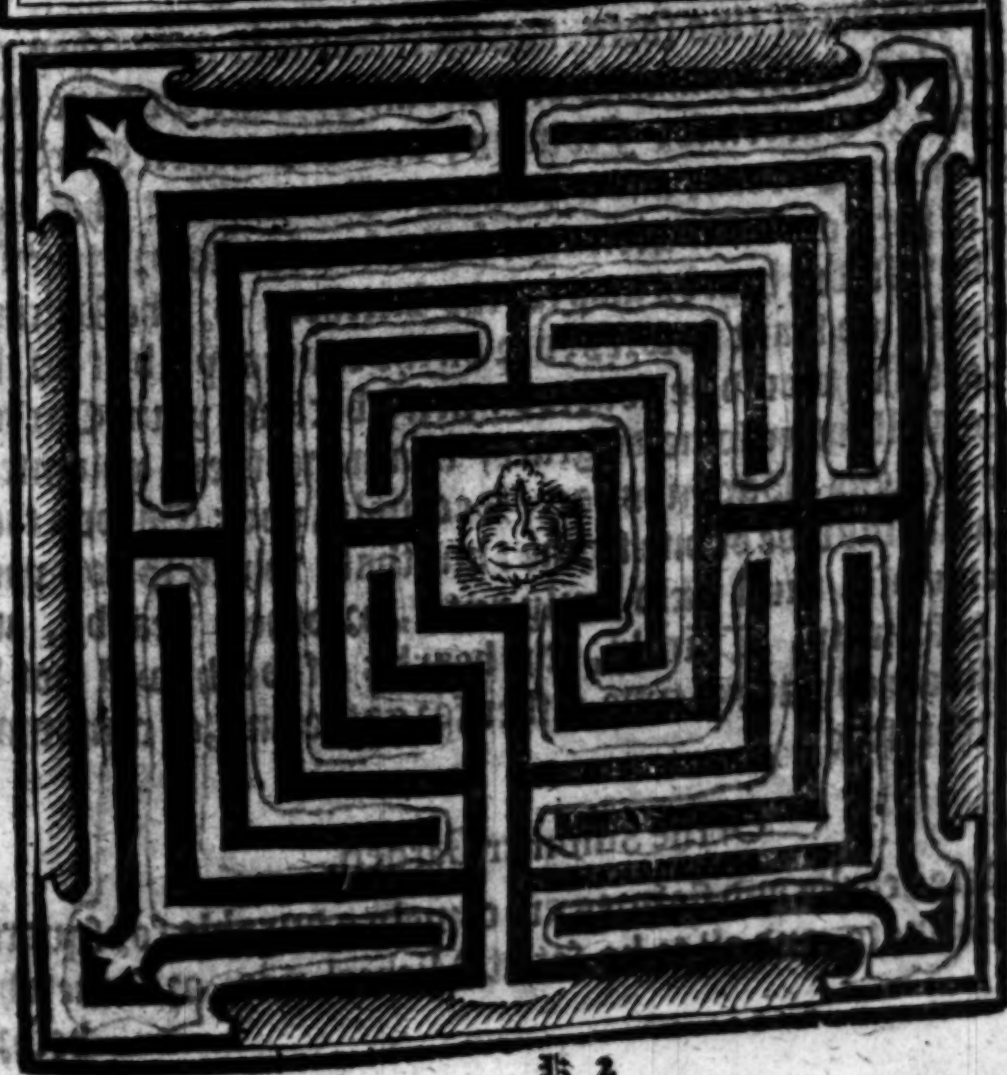




Quall.



Mozc.



CHAP. IIII. Of the Quantitie.

**A** Garden requireth not so large a scope of ground as an Orchard, both in regard of the much Weeding, dressing and remouing, and also the paines in a Garden is not so well repayed home, as in an Orchard. It is to be granted, that the Kitchen garden doth yeeld rich gaines by Berries, Roots, Cabbages, &c. yet these are no way comparable to the fruits of a rich Orchard: but notwithstanding I am of opinion, that it were better for England, that we had more Orchards and Gardens, and more large. And therefore we leane the quantity to euery mans ability and will.

CHAP. V. Of Fence.

**S**eeing we allot Gardens in Orchard plots, and the benefit of a Garden is much, they both require a strong and shewing fence. Therefore leaving this, let vs come to the hearbs themselves, which must be the fruit of all these labours.

CHAP. VI. Of two Gardens.

**H**earbs are of two sorts, and therefore it is met (they requiring diuers manners of Husbandry) that we haue two Gardens: A Garden for Flowres, and a Kitchen Garden: or a Summer Garden, and a Winter Garden: not that we meane so perfect a distinction, that y<sup>e</sup> Garden for Flowres should or can be without hearbs good for the Kitchen, or the Kitchen Garden should want flowres, nor on the contrary: but for the most part they would be seuered: first, because your Garden flowres shall suffer some disgrace, if among them you intermingle Onions, Parsnips, &c. Secondly, your Garden that is durable, must be of one forme: but that, which is for your Kitchens vse, must yeeld daily roots, or other hearbs, and suffer deformity. Thirdly, the hearbs of both will not be both alike ready, at one time, either for gathering, or remouing. First therefore

Of the Summer Garden.

**T**hese hearbs and flowres are comely & durable for squares and knots, and all to be set at Michael-tide, or somewhat before,



before, that they may be settled in, and taken with the ground, before Winter, though they may be set, especially some in the Spring.

Roses of all sorts (spoken of in the Orchard,) must be set: Some use to set slips and twine them, which sometimes, but seldom thriue all.

Rosemary, Lauender, Bee-flowers, Ilop, Sage, Lime, Cowslips, Pyony, Daffies, Clove Gilliflowers, Pinks, Red thernwood, Lillies, of all which hereafter.

Of the Kitchen Garden.

**T**hough your Garden for flowers both in a sort peculiarly challenge to it selfe a profit, and exquisite forme to the eyes, yet you may not altogether neglect this, where your hearbs for the pot doe grow. And therefore, some here make comely borders with the Hearbs aforesaid. The rather because abundance of Roses and Lauender yeld much profit, and comfort to the senses: Rosewater and Lauender, the one cordiall (as also the Violets, Burrage, and Buglas) the other relieving the spirits by the sence of smelling: both most durable for smell, both in flowers and water: you need not here raise your beds, as in the other Garden, because Summer towards, will not let too much wet annoy you. - And these hearbs require more moisture: yet must you haue your beds drained, that you may go betwixt to wade, and somewhat forme would be expected: To which it auaileth, that you place your hearbs of biggest growth, by waies, or in borders, as Fenell, &c. and the lowest in the midst, as Saffron, Strawberries, Onions, &c.

Division of hearbs.

**G**arden hearbs are innumerable, yet these are common and sufficient for our Country Housewives.

Hearbs of greatest growth.

Fenell, Angelica, Tansie, Hollyhock, Louage, Cilly, Campanie, French Wallflowers, Lillies, French Poppie, Chome, Saffron, and Clove.

Heards of middle growth.

Burrage, Buglas, Barlie, Sweet Sicillye, Flower-delute, Stocke Gillyflowers, Wall-flowers, Anniseeds, Coriander, Feather-fewell, Marigolds, Oculus Christi, Langdibere, Alexanders, Carduus Benedictus.

Heards of smallest growth.

Pansye, or Harts ease, Coast Pargeram, Sauery, Strawberies, Saffron, Lycoras, Daffadownillies, Leekes, Chives, Chibals, Skerots, Onions, Batchelors buttons, Daises, Pennywall.

Hitherto I have onely reckoned by, & put in this rank, some hearbs. Their husbandry followe each in an Alphabetical order, the better to be found.

## CHAP. VIII.

### Husbandry of Hearbs.

**A**lexanders are to be renued as Angelica. It is a timely Pot-herbe.

Angelica is renued with his seede, whereof he beareth plenty the second yeere, and so dieth. You may remove the roots the first yeere. The leaues distilled, yeld water soueraigne to erpel paine from the stomacke. The root dyed taken in the fall, stoppeth the pores against infections.

Annyseeds make their growth, and beareth seeds the first yeere, and dieth as Coriander: it is good for opening the pipes, and it is used in Comfits.

Artichoakes are renued by diuiding the roots into sets, in March, euery third or fourth yeere. They require a severall blage, and therefore a severall whole plot by themselves, especially considering they are plentiful of fruit much desired.

Burrage and Buglas, two cordials, renue themselves by seed yeerely, which is hard to be gathered: they are exceeding good Pot-herbs, good for Biles, and most comfortable for the heart and stomack, as Quinches and Wardenes.

Camomile, set roots in banks and walks. It is sweet smelling, quallifying head-ache.

Cabbages require great care, they seed the second yeere: sowe them in February, remove them when the plants are an handfull long, set deepe and wet. Alike well in drought for the white



## The Country Housewives Garden.

Fi

white Caterpillers worne, the spanies vnder the leafe closely: for euery liuing Creature both seeke food and quiet thester, and growing quicke, they draw to, and eat the heart: you may find them in a raine or beawie morning. It is a good potheard, and of this hearb called Cole, our Country Housewives giue their pottage their name, and call them Caell.

Cardus Benedictus, or blessed thistle, seeds and dyes the first yeere, the excellent vertue thereof I referre to Verbals: for we are Gardiners, not Physicians.

Carrots are sowne late in Aprill or May, as Turneps, else they seed the first yeere, and then their roots are naught: the second yeere they dye, their roots grow great, and require large room.

Chibals or Chives haue their roots parted, as Garlike, Lillies, &c. and so are they set euery third or fourth yeere: a good pot-herbe opening, but euill for the eyes.

Claric is sowne, it seeds the second yeere, and dyes. It is somewhat harsh in taste, a little in pottage is good, it strengthneth the reins.

Coast, Roots parted make sets in March: it beeres the second yeere: it is vsed in Ale in May.

Coriander is for blage and bles, much like Anniseeds.

Daffadownillies haue their roots parted, and set once in three or foure yeeres, or longer time. They flower timely, and after Midsummer, are scarcely seene. They are more for ornament, than vse, so are Daisies.

Dailye roots parted and set, as Flower-delice and Camomile, when you see them grow too thicke or decay. They be good to keepe by, and strengthen the edges of your borders, as Pinkes, they be red, white, mixt.

Ellycampanoroot is long lasting, as is the Lungage, it seeds yeerely, you may diuide the root, and set the root, taken in winter it is good (being dyed, powdered and drunke) to kill itches.

Endiue and Succory are much like in nature, shape, and vse, they renue themselves by seed, as Fennell, and many other hearbs. You may renue them before they put forth Shanks, a good potheard.

Fennell is renued, either by the seeds (which it beareth the second

second yeere, and so yeerely in great abundance) sowe in the fall or spring, or by dividing one root into many sets, as Artichoke, it is long of growth and life. You may remove the root without hurt. It is exceeding good for the eyes, distilled, or any otherwise taken: it is used in dressing Hives for swarms, a very good Sothearbe, or for Sallets. *Urtica dioica*

Fecherfewle shakes seed. Good against a shaking Fever, taken in a posset-drinke fasting. *Urtica dioica*

Flower-deluce, long lasting. Divide his roots, and set: the roots dyed have a sweet smell. *Urtica dioica*

Garlicke may be set an handfull distance, two inches deepe, in the edge of your beds. Part the heads into severall clowes, and every clowe set in the hinder end of February, will increase to a great head before September: good for opening, evil for eyes: when the blade is long, fast two and two together, the heads will be bigger. *Urtica dioica*

Hollyhocke riseth high, seedeth and dgeth: the chiefe use I know is ornament. *Urtica dioica*

Ilop is reasonable long lasting: yong roots are good to set, slips better. A good Sothearbe. *Urtica dioica*

July-flowers, commonly called Gilly-flowers, or Clow- July-flowers (I call them so, because they flowre in July) they have the name of Clowes, of their sent. I may well call them the King of Flowres (except the Rose) and the best sort of them, are called Queene July-flowres. I have of them nine or ten severall colours, and divers of them as bigge as Roses: of all flowres (save the Damask Rose) they are the most pleasant to sight and smell: they last not past three or foure yeeres without removing. Take the slips (without shankes) and set any time, save in extreme frost, but especially at Michael-tide. Their use is much in ornament, and comforting the spirits, by the sence of smelling. *Urtica dioica*

July-flowres of the Wall, or Wall July-flowres, Wall-flowres, or Bee-flowres, or Winter July-flowres, because growing in walls, even in winter, and good for Bees, will grow even in stone walls, they will seme dead in summer, and yet revieve in winter. They yeld seed plentifully, which you may sow at any time, or in any broken earth, especially on the top of a mud wall, but moyst, you may set the root before it



it be brought, every slip that is not rooted, will take root, or  
crop him in Summer, and he will flower in Winter: but his  
winter seed is but tiny. This and Palmes are exceeding good,  
and timely for Bees.

Leeks peeld seed the second yeere, unrenewed and die, but  
lesse you remove them, vsuall to eat with salt and bread, as  
nyons alwaies greens, good Botheerbe, enill for the eyes.

Laurel Spike would be removed within tenen yeeres, or  
eight at the most. Solips flowered as Hop and Sage, would be  
best at Michael-tide. This flower is good for Bees, most com-  
fortable for smelling, except Roses: and kept dry, is as strong  
after a yeere, as when it is gathered. The water of this is  
comfortable.

White Laurel would be removed sooner.

Lettice peelds seed the first yeere, and dyes sowe betime, and  
if you would have them Cabbage for Sallets, remove them as  
you doe Cabbage. They are vsuall in Sallets, and the pot.

Lillies white and red, removed once in three or foure yeeres  
their roots peeld many wets, like the Carliche. Michael-tide  
is the best: they grow high, after they get root: these roots are  
good to breake a Wyle, as are Mallowes and Sorrell.

Mallowes French, or gagged, the first or second yeere, seed  
plentifully: sowe in March, or before, they are good for the house-  
wives pot, or to breake a bunch.

Marigolds most commonly come of seed, you may remove  
the Plants, when they be two inches long. The double Paris  
gold, being as big as a little Rose, is good for the w. They are a  
good Botheerbe.

Oculus Christi, or Christs eye, seeds and dyes the first or se-  
cond yeere: you may remove the young Plants, but seed is bet-  
ter: one of these seeds put into the eye, within three or foure  
houres will gather a thicke skin, cleere the eye, and balt it selfe  
sooth without hurt to the eye. A good Botheerbe.

Onyons are sowe in February, they are gathered at Mi-  
chael-tide, and all the Summer long, for Sallets, as also young  
Parsly, Sage, Chibals, Lettice, Sweet Sicilly, Fennell, &c.  
good alone, or with meat, as Putton, &c. for sauce, especially  
for the pot.

Parsly sowe the first yeere, and die the next yeere: it seeds  
plens

plentifully, an hearbe of much vse, as sweet Sicily is. The seed  
and roots are good against the stone.

Parfnepe require an whole plot, they be plentifull and com-  
mon: sowe them in February, the Kings (that is in the middle)  
seed broadest and reddest. Parfnepe are fattenance for a strong  
Stomacke, not good for small eyes: When they couer the earth in  
a drought, to tread the tops, make the roots bigger.

Peny-royall, or Pudding Galle, creepes along the ground,  
like ground Iule. It lasts long, like Daisies, because it puts  
and spreads daily new roots. Divide, and remove the roots, it  
hath a pleasant taste and smell, good for the pot, or backt meat,  
or Haggas Pudding.

Pumpions: Set seeds with your finger, a finger deepe, late  
in March, and so soon as they appeare, every night if you doubt  
frost, couer them, and water them continually out of a water-  
pot: they be very tender, their fruit is great and waterish.

French Poppy beareth a faire flower, and the Seed will  
make you sleepe.

Raddish is sauce for cloyed stomacks, as Capers, Olives,  
and Cucumbers, cast the seeds all summer long here and there,  
and you shall have them alwaies yong and fresh.

Rosemary, the grace of Herbs in England, in other Coun-  
tries common. To set slips immediately after Lammes, is the  
surest way. Seede sowne may proue well, so they be sowne in  
hot weather, somewhat moist, and good earth: for the Pearbe,  
though great, is neth and tender (as I take it) brought from  
hot Countries to vs in the cold North: set thin. It becomes a  
Window well. The vse is much in meats, more in phisicke,  
most for Beers.

Rue, or Hearbe of Grace, continually greene, the slips are set.  
It lasts long as Rosemary, Sothernwood, &c. too strong for  
mine Housewifes pot, vlesse she will hure Ale therewith,  
against the Plague: let him not seede, if you will have him  
last.

Saffron, every third yeere his roots would be removed at  
Mid-summer: for when all other hearbs grow most, it dyeth.  
It floweth at Michael-tide, and groweth all Winter: keepe  
his flowers from birds in the morning, and gather the yelow  
(for they shape much like Lillies) dry, and after dry them:  
they



## The Country Housewife's Garden.

15

they be precious, expelling diseases from the heart & stomache. Saucy seeds and dyes the first peece, good for my Housewife's pot and pye.

Sage: set slips in May, and they grow aye: Let it not seed, it will last the longer. The vse is much and common. The Spanish Proverbe is tritum:

*Cum moritur homo, cum saluta crescit in honore.*

Skerors, the roots are set when they be parted, as Pye, and Flower-deluce at Michael-tide: the root is but small and very sweet. I know none other speciall vse but the Table.

Sweet Sicily, long lasting, pleasantly tasting, either the seed sowne, or the roots parted, and remoned, makes increase, it is of like vse with Parsly.

Strawberries long lasting, set roots at Michael-tide, or the spring, they be red, white and greene, and ripe when they be great and soft, some by Mid-summer with vs. The vse is: they will cole my Housewife well, if they be put in Wine or Creame with Sugar.

Time, both seeds, slips and roots are good. If it seed not, it will last thre or foure yeeres or more, it smelleth comfortably. It hath much vse: namely, in all cold meats, it is good for Bees.

Turnep is sowne. In the second yeere they beare plenty of seed: they require the same time of sowing that Carrets doe: they are sick of the same disease that Cabbages be. The root increaseth much, it is most wholesome, if it be sown in a good and well tempered earth: Soneraigne for eyes and Bees.

I reckon these hearbs onely, because I teach my Country Housewife, not skilfull Artificers, and it should be an endlesse labour, and would make the matter tedious to reckon vp, Lindibeece, Stoeke-July-flowers, Charuall, Valerian, Go-to-bed-at-noone, Piony, Licoras, Tansie, Garden-mints, Germander, Centaurie, and a thousand such physicke Hearbs. Let her first grow cunning in this, and then she may enlarge her Garden, as her skill and abilitie increaseth. And to helpe her the more, I haue set her downe these obseruations.

CHAP.

## General Rules in Gardening.

**I**n the South parts Gardening may be more timely, & more safely done; than with us in Yorkeshire, because our ayre is not so favourable, nor our ground so good.

2 Secondly, most seeds shakt, by turning the good earth, are renued, their mother the earth keeping them in her bowels, till the Sunne their Father can reach them with his heat.

3 In setting hearbs, leaue no top more then an handfull above the ground, nor more than a foot vnder the earth.

4 Twine the roots of those slips you set, if they will abide it. Cilly flowers are too tender.

5 Set moist, and solve day.

6 Set slips without shanks at any time, except at Midsummer, and in frosts.

7 Heding spoiles the most roots, as drawing the heart and sap from the root.

8 Gather for the pot and medicines, hearbs tender & greene, the sap being in the top, but in winter the root is best.

9 All the hearbs in the Garden for flowers, would once in seven yeres be renued, or soundly watred with puddle water, except Rosemary.

10 In all your Gardens and Orchards, bankes and seats of Camomile, Penny-royall, Daisies and Violets, are seemely and comfortable.

11 These require whole plots: Artichokes, Cabbages, Turneps, Parsneps, Onyons, Carrets, and (if you will) Saffron, and Scerrets.

12 Gather all your seeds, dead, ripe, and dry.

13 Lay no dung to the roots of your hearbs, as usually they doe: for dung not melted is too hot, even for trees.

14 Thin setting and sowing (so the roots stand not past a foot distance) is profitable, for the hearbs will like the better. Greater hearbs would haue more distance.

15 Set and solve hearbs in their time of growth (except at Mid-



midsummer, for then they are too too tender) but trees in their time of rest.

16. A good Housewife may, and will gather store of hearbs for the pot, about Lammes, and dry them, and pound them, and in winter they will make good service.

Thus haue I lined out a Garden to your Country Housewives, and giuen them rules for common hearbs. If any of them (as sometimes they are) be knotty, I refer them to chap.

3. The skill and paines of weeding the Garden with weeding knives of fingers, I refer to themselves, and their maids, willing them to take the opportunity after a showre of raine: withall I aduise the Mistresse, either to present her selfe, or to teach her maids to know hearbs from weeds. Weeding.  
A good note.

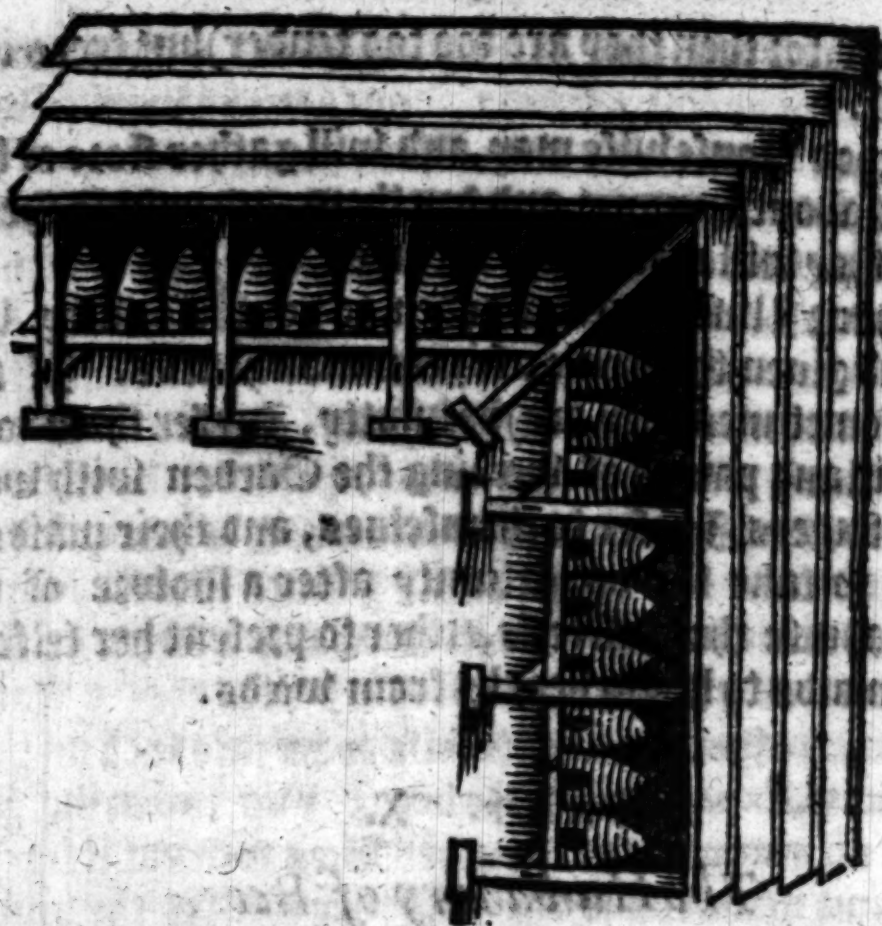
CHAP. X.

The Husbandry of Bees.

**T**here remaineth one necessary thing to be prescribed, which in mine opinion makes as much for ornament as either Flowers or forme, or cleanness, and I am sure as commodious, as any of, or all the rest: which is Bees, well ordered. And I will not account her any of my good Housewives, that wanteth either Bees or skilfulnesse about them. And though I know some haue written well and truly, and others more plentifully upon this Theame: yet somewhat haue I learned by experience (being a Bee-master my selfe) which hitherto I cannot finde put into writing, for which I thinke our Housewives will count themselves beholding vnto me.

The first thing that a Gardiner about Bees must be carefull for, is an house not flakes and stones abroad, Sub dio: for flakes rot and reele, raine and weather eat your hives, and couers, and cold moose of all is hurtfull for your Bees. Therefore you must haue an house made along, a sure dry wall in your Garden, nere, or in your Orchard: for Bees loue Flowers and wood with their hearts. Beehouse.

This



This is the forme, a frame standing on posts with a Flaze (if you would haue it hold more Hines, two flazes boarded) laid on Bearers, and backe posts, covered ouer with boards state-wise. Let the flazes be without holes or clefts, lest in casting time, the Bees lye out, and loyter. And though your Hines stand within an hand, breadth the one of another: yet will Bees know their owne home. In this frame may your Bees stand dry and warme, especially if you make doores like doores of windowes to shrowd them in Winter, as in an house: provided you leaue the Hines mouthes open. I my selfe haue deuised such an house, and I finde that it kepes and strengthens my Bees much, and my Hines will last six to one.

Hines.

M. Markam commendes Hines of wood. I discommend them not: but straw Hines are in vse with vs, and I thinke with all the world, which I commend for nimblenes, closenesse, warmnesse and drynesse. Bees loue no externall motions of dawbing, or such like. Sometimes occasion shall be offered to lift and turne Hines, as shall appeare hereafter. One light entire hine of straw in that case is better, than one that is dawbed, weighty & cumbersome. I wish every hine, for a keeping swarme, to hold thre pecks at least in measure. For too little Hines procure



cure Bees, in casting time, either to lye out, & loyter, or else to cast befoze they be ripe & strong, and so make weake swarmes and untimely: Whereas if they haue come sufficient, they ripen timely, and casting seasonably, are strong, and fit for labour presently. Neither would the hie be too great, for then they loyter, and waste meat and time.

Your Bees delight in wood, for feeding, especially for casting: therefore want not an Orchard. A Mayes swarme is worth a Dares Foale: if they want wood, they be in danger of flying away. Any time befoze Midsummer is good, for casting and timely befoze Iuly is not euill. I much like M. Markams opinion for hiving a swarme in combs of a dead or forsaken hie, so they be fresh and cleanly. To thinke that a swarme of your owne, or others, will of it selfe come into such an hie, is a mere conceit, Expetio crede Roberto. His smearing with honey, is to no purpose, for the other Bees will eat it vp. If your swarme knit in the top of a tree, as they will, if the winde beat them not to fall downe, let the steele or ladder described in the Orchard, doe you service.

Hiving of Bees.

The lesse your Spelkes are, the lesse is the waste of your honey, and the more easily will they draw, when you take your Bees. Foure Spelkes athwart, and one top Spelke are sufficient. The Bees will fasten their Combs to the Hie. A little honey is good: but if you want, Fennell will serue to rub your Hie withall. The Hie being drest and ready spelkt, rubb and the hole made for their passage (I vse no hole in the Hie, but a piece of wood hoal'd, to saue the hie and keepe out Vice) shake in your Bees, or the most of them (for all commonly you cannot get) the remainder will follow. Many vse smoke, Pettles, &c. which I utterly dislike: for Bees loue not to be molested. Ringing in time of casting is a mere fancie, violent handling of them is simply euill, because Bees of all other creatures, loue cleanlinesse and peace. Therefore handle them leasurably and quietly, and their Keeper whom they know, may doe with them, what he will, without hurt: Being hived at night, bring them to their seat. Set your Hives all of one pare together.

Spelkes.

Signes of breeding, if they be strong.  
1 They will adoe dead young Bees and Droanes.  
2 They

2. They will sweat in the morning, till it run from them, alwaies when they be strong.

*Signaes of casting.*

1. They will dye Droanes, by reason of heat.

2. The yong swarme will once or twice in some faire season, come forth mustering, as though they would cast, to prone themselves: and goe in againe.

3. The night before they cast, if you lay your eare to the Hives mouth, you shall heare two or three, but especially one above the rest, cry, Up, bp, bp; or, Tout, tout, tout, like a trumpet, sounding the alarm to the battell.

Much descanting there is, of, and about the Master-bee, and their degrees, orders, and government: but the truth in this point is rather imagined, then demonstrated. There are some coniectures of it, viz. we see in the Combs biners greater houses than the rest, and we heare commonly the night before they cast, sometimes one Bee, sometimes two, or more Bees, give a lowd and severall sound from the rest, and sometimes Bees of greater bodie than the common sort: but what of all this? I leane not on coniectures, but love to set downe that I know to be true, and leane these things to them that love to divine. keepe none weake, for it is hazard, oftentimes with losse: Feeding will not helpe them: for being weake, they cannot come downe to meat, or if they come downe, they dye, because Bees weake cannot abide cold. If none of these, yet will the other Bees being strong, smell the honey, and come and spoile, and kill them. Some helpe is in casting them, to put two weake swarmes together, or as M. Markam well saith: Let them not cast late, by raising them with wood or stone: but with imps (say I.) An impe is three or foure weathes, wrought as the hive, the same compasse, to raise the hive withall: but by experience in tryall, I have found out a better way by Clustering, for late or weake swarmes hitherto not found out of any that I know. What is this: After casting time, if I have any stocke proud, and hindered from timely casting, with former winters poverty, or evill weather in casting time, with two handles and crooks, fitted for the purpose, I turn by that stock so pestered with Bees, and set it on the crowne, upon which is turned with the mouth upward, I place another empty hive

Catching.

Clustering.



hine well dress, and spelkt, into which without any labour, the Swarme that would not depart, and cast, will presently ascend, because the old Bees haue this qualitie (as all other breeding creatures haue) to expell the young, when they haue brought them vp. There will the Swarme build as kindly, as if they had of themselves bene cast. But be sure you lay betwixt the hines some straight and cleanly sticke or stiches, or rather a board with holes, to keepe them asunder: otherwise they will loyne their workes together so fast, that they cannot be parted. If you so keepe them asunder at Michael-tide, if you like the weight of your Swarme (so the goodnesse of Swarmes is tried by weight) so caught, you may set it by for a stocke to keepe. Take heed in any case the combs be not broken, for then the other Bees will smell the honey, and spoyle them. This haue I tried to be very profitable for the sauing of Bees. The Instru- ment hath this forme. The great straight piece is wood, the rest are iron claspes and nayles, the claspes are loose in the Staples: Two men with two of these fastened to the Hine, will easily turne it vp.



They gather not till Iuly; for then they be discharged of their yong, or else they are become now strong to labour, and now sap in flowers is strong and proud: by reason of time, and force of Sunne. And now also in the month (and not before) the beards of greatest vigour put their flowers; As Beanes, Fennell, Burrage, Rape, &c.

The most seasonable weather for them, is heat, & drought, because the new Bee can neither abide cold or wet: and showers (which they well fore-see) doe interrupt their labours, unless they fall on the night, and so they further them.

After casting time, you shall benefit your stocks much, if you helpe them to kill their Droanes, which by all probability and iudgement, are an idle kinde of Bees, and wastefull. Some say they breed and haue some yong Droanes in taking their honey, which I know is true. But I am of opinion, that there are also Bees which haue lost their stings, and so being, as it were gelded, become idle and great. There is great vse

Droanes.



of them: Deus, & natura nihil fecit frustra. They heat the Bees, and cause them cast the sooner. They neuer come forth- but when they be ouer-heated. They neuer come home loaden. After casting time, and when the Bees want meat, you shall see the labouring Bees fasten on them, two, three, or foure at once, as if they were thienes to be led to the gallows, and killing them, they cast out, and draw them farre from home, as hateful enemies. Our Housewife, if she be the Keeper of her owne Bees (as she had need to be) may with her bare hand in the heat of the day, safely destroy them in the hives mouth. Some vse towards night, in a hot day, to set befoze the mouth of the hive a thin boord, with little holes, in at which the lesser Bees may enter, but not the droanes, so that you may kill them at your pleasure.

Annoyan-  
ces.

Snaples spoile them by night like theemes: they come so quietly, and are so fast, that the Bees feare them not. Take early and late, especially in a rainie or dewy evening or morning.

Mice are no lesse hurtfull, and the rather to hives of straw: and therefore couerings of straw draw them. They will in either at the mouth, or shere themselves an hole. The remedie is good Cats, Rats-bane and watching.

The cleanly Bee hateth the smoake as poison, therefore let your Bees stand nearer your garden, than your Bex-house or kitchen.

They say Sparrowes and Swallowes are enemies to Bees, but I see it not.

More hives perish by winters cold, than by all other hurts: For the Bee is tender and nice, and onely lyes in warme weather, and dyes in cold: And therefore let my Housewife be perswaded, that a warme dry house befoze described, is the chiefest helpe she can make her Bees against this, & many more mischiefes. Many vse against cold in Winter, to stop vp their hive close, & some set them in houses, perswading themselves, that thereby they relieue their Bees. First, tossing and moving is hurtfull. Secondly, in houses, going, knocking, and shaking is noysome. Thirdly, too much heat in an house is unnatural for them: but lastly, and especially, Bees cannot abide to be stoppt close vp. For at every warme season of the sun they re-  
turne,



hive, and lining eat, and eating must needs purge abroad, (in her house) the cleanly Bee will not purge her selfe. Judge you what it is for any living creature, not to disburden nature. Being shut up in calmes seasons, lay your care to the hive, and you shall heare them yarme and yell, as so many purged prisoners. Therefore impound not your Bees, so profitable and free a creature.

Let none stand above three yeeres, else the combs will be blacke and knotty, your honey will be thin and uncleanly: and if any cast after three yeeres, it is such as have swarmes, and old Bees kept all together, which is great losse. Smoaking with rags, rozin, or brimstone, many vse: some vse smoking in a tub of cleane water, and the water well brewed, will be good botchet. Draw out your spelkes immediately with a paire of pinchars, lest the wood grow soft and swell, and so will not be drawne, then must you cut your hive.

Taking of Bees.

Let no fire come neere your honey, for fire softeneth the ware and dole, and makes them run with the honey. Fire softeneth, weakneth, and hindereth honey for purging. Break your Combs small (when the dead empty combs are parted from the loaden combs) into a Sine, bozne over a great bowle, or vessell, with two staves, and so let it run two or three dayes. The sooner you run it up, the better will it purge. Run your swarme honey by it selfe, and that shall be your best. The elder your Hives are, the worse is your honey.

Strayning honey.

Usuall vessels are of clay, but after wood be satiated with Honey (for it will leake at first: for Honey is marvellously searching, the thick, and therefore vertuous) I vse it rather because it will not breake so soone, with fairs, frosts, or otherwise, and greater vessels of clay will hardly last.

Vessels.

When you vse your honey, with a spone take off the skin which it hath put up.

And it is worth the regard, that Bees thus used, if you have but forty stocks, shall yeld you more commodity clearly than forty acres of good ground. And thus much may suffice, to make good Housewives loue and have good Gardens and Bees.



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And it is to be noted that the more the garden is watered, the more the plants will flourish. And it is to be noted that the more the garden is watered, the more the plants will flourish.

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The Art of propagating Plants. *Knill the p...by*



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**A MOST PROFITABLE**

**new Treatise, from approved experience of  
the Art of propagating Plants: by  
Simon Harward.**

**CHAP. I.**

*The Art of propagating Plants.*



Here are foure sorts of Planting, or pro-  
pagating, as in laying of shoots or little  
branches, whiles they are yet tender, in  
some pit made at their foot, as shall be  
said hereafter, or upon a little ladder  
or Basket of Earth, tyed to the bottome  
of the branch, or in bearing a Willow  
therein, and putting the branch of the  
Tree into the hole, as shall be fully declared in the Chapter of  
Grafting. There are likewise seasons to propagate in, but the  
best is in the Spring, and March, when the Trees are in the  
Flower, and doe begin to grow lusty. The young planted  
Stems or little Grafts must be propagated in the beginning  
of Winter, a foot deepe in the earth, and good manure mingled  
amongst the earth, which you shall cast forth of the pit, wherein  
you meane to propagate it, to tumble it in upon it againe. In  
like manner your superfluous Stems, or little Plants, must be  
cut close by the earth, when as they grow about some small  
Tree, which we meane to propagate, for they would doe no-  
thing but rot. For to propagate, you must digge the earth  
round about the tree, that so your roots may be laid in a man-  
ner

2.

ner halfe bare. Afterward draw into length the pit on that side where you meane to propagate, and according as you perceiue that the roots will be best able to yeld, and be gouerned in the same pit, to vse them, and that with all gentlenesse, and stop close your Siens, in such sort, as that the weath which is in the place where it is grafted, may be a little lower then the Siens of the new Wood, growing out of the earth, even so high as it possible may be. If the trees that you would propagate be somewhat thicke, and thereby the harder to ply, and somewhat stiffe to lay in the pit: then you may wet the stocke almost to the midst, betwixt the root and the weathing place, and so with gentle handling of it, bow downe into the pit the wood which the grafts haue put forth, and that in as round a compasse as you can, keeping you from breaking of it: afterward lay ouer the cut, with gummed Ware, or with grauell and sand.

## CHAP. II.

*Grafting in the Barke.*

**G**rafting in the Barke, is vled from mid-August, to the beginning of Winter, & also when the Westerne winde beginneth to blow, being from the 7. of February, vnto the 1. of June. But there must care be had, not to graffe in the barke in any rainy season, because it would wash away the matter of copning the one and the other together, and so hinder it.

3.

Grafting in the bud, is vled in the Summer time, from the end of May, vntill August, as being the time when the trees are strong and lusty, and full of sap and leaues. To wit, in a hot Countrey, from the midst of June, vnto the midst of July: but cold Countreies, to the midst of August, after some smal showres of Raine.

If the Summer be so exceeding dry, as that some trees doe withhold their sap, you must wait the time till it doe returne.

Graft from the fall of the Pone, vntill the end of the old.

You may graft in a Cleft, without hauing regard to the Raine, for the sap will keepe it off.

You may graft from mid-August, to the beginning of November: Comes ouer with draw both mightily preserve the graft.



## The Art of propagating Plants.

3

It is better to graft in the evening, then the morning.

The furniture and toles of a Grafter, are a Basket to lay his Grafts in, Clay, Ornell, Sand, or strong Earth, to draw ouer the plants clouen: Wasse, Wollen cloathes, barks of Willow to ioyne to the late things and earth before spoken, and to keepe them fast: Wiers to tye againe vpon the bark, to keepe them firme and fast: gummed Wax, to dresse and cover the ends and tops of the grafts newly put, that so the raine and cold may not hurt them, neither yet the sap rising from belowe, be constrained to returne againe vnto the shoots. A little Sawe or hand-Sawe, to sawe off the stocke of the plants, a little Knife or Pen-knife to grasse, and to cut and sharpen the grafts, that so the bark may not pill nor be broken, which often cometh to passe when the graft is full of sap. You shall cut the grasse so long, as that it may fill the cliffe of the plant, and therewithall it must be left thicker on the bark side, that so it may fill by both the cliffe and other incisions, as any need is to be made, which must be alwaies well ground, well barnished without all rust. Two wedges, the one broad for thicke trees, the other narrow for lesse and tender trees, both of them of box, or some other hard and smooth wood, or Steele, or of very hard iron, that so they may need lesse labour in making them sharpe.

A little hand-Bill to set the plants at more liberty, by cutting off superfluous boughs, helld of Junor, Box, or Brazell.

### CHAP. III.

#### *Grafting in the cleft.*

**T**he manner of grafting in a cleft, to wit, the stock being cloued, is proper not onely to trees, which are as great as a mans legs or armes, but also to greater. It is true, that in as much as the trees cannot easily be clouen in their stocke, that therefore it is expedient to make incision in some one of their branches, and not in the maine body, as we see to be practised in great Apple-trees, and great Pearre-trees, and as we haue already declared heretofore.

To graft in the cleft, you must make choice of a graft that is full of sap and iuyce, but it must not be, but till from after January untill March: And you must not thus graft in any tree



tree that is already budded, because a great part of the iuyce & sap would be already mounted vp on high, and risen to the top, and there dispersed and scattered hither and thither, into euery sprig and twig, and vse nothing welcome to the graft.

6.

You must likewise be resolu'd not to gather your graft the day you graft in, but ten or twelue dayes before: for otherwise, if you graft it new gathered, it will not be able easily to incorporate it selfe with the body and stocke, where it shall be grafted; because that some part of it will dye, and by this meanes will be a hinderance in the stocke to the rising vp of the sap, which it should communerate vnto the graft, for the making of it to put forth. And whereas this dyed part will fall a crumbling, and breaking thorow his rottenesse, it will cause to remaine a concavittie, or hollow place in the stocke, which will be an occasion of a like inconuenience to befall the graft. Moreover, the graft being new and tender, might easily be hurt of the bands, which are of necessitie to be tyed about the stocke, to keepe the graft firme and fast. And you must further see, that your plant was not of late remoued, but that it haue already fully taken root.

When you are minded to graft many grafts into one cleft, you must see that they be cut in the end all alike.

7.

See that the grafts be of one length, or not much differing, and it is enough, that they haue three or foure eylets without the wench when the plant is once sawed, and lopped of all his small shies and shoots round about, as also impled of all his branches, if it haue many: then you must leaue but two at the most, before you come to the cleauing of it: then put to your little Saw, or your Knife, or other edged toole that is very sharpe, cleaue it quite thorow the middell, in gentle and soft sort: First, tying the stocke very sure, that so it may not cleaue farther then is need: and then put to your Wedges into the cleft, vntill such time as you haue set in your grafts, and in cleauing of it, hold the Knife with the one hand, and the tree with the other, to helpe to keepe it from cleauing too farre. Afterwards put in your wedge of Wore or Brazill, or bone, at the small end, that so you may the better take it out againe, when you haue set in your grafts.

8.

If the stocke be clonon, or the Barke loosed too much from the



## *The Art of propagating Plants.*

the wood: then cleane it downe lower, and set your grafts in, and looke that their incision be fit, and very iustly answerable to the cleft, and that the two saps, first, of the Plant and graft, be right and even set one against the other, and so handsomely fitted, as that there may not be the least appearance of any cut or cleft. For if they doe not thus iumpe one with another, they will neuer take one with another, because they cannot worke their seeming matter, and as it were cartilaginous glue in convenient sort or manner, to the gluing of their ioynts together. You must likewise beware, not to make your cleft ouerthwart the pitch, but somewhat aside.

The barke of your Plant being thicker then that of your Graft, you must set the graft so much the more outwardly in the cleft, that so the two saps may in any case be ioyned, and set right the one with the other: but the rinde of the Plant must be somewhat more out, then that of the grafts on the cloven side.

To the end that you may not faile of this worke of iumping, you must principally take heed, not to ouer-cleane the Stocks of your Trees. But before you widen the cleft of your wedges, binde, and goe about the Stocke with two or three turnes, and that with an Dzier, close drawn together, vnderneath the same place, where you would haue your cleft to end, that so your Stocke cleane not too farre, which is a very vsnall cause of the miscarrying of grafts, inasmuch as hereby the cleft standeth so wide and open, as that it cannot be shut, and so not grow together againe; but in the meane time spendeth it selfe, & breatheth out all his life in that place, which is the cause that the Stocke and the Graft are both spilt. And this falleth out most often in Plum-trees, and branches of trees. You must be careful so to ioyne the rinds of your Grafts, and Plants, that nothing may continue open, to the end that the wind, moisture of the clay or raine, running vpon the grafted place, do not get in: when the Plant cleaueth very straight, there is not any danger nor hardnesse in sloping downe the Graft. If you leaue it somewhat bneuen, or rough in some places, so that the saps both of the one and of the other may the better grow, and be glued together, when your grafts are once well ioyned to your Plants, draw out your Wedges very softly, lest you dis-  
place



place them againe, you may leane there within the cleft some small end of a wedge of greene wood, cutting it very close with the head of the Stocke: Some cast Glue into the cleft, some Sugar, and some gummed Ware.

11.

If the Stocke of the Plant whereupon you intend to graft, be not so thicke as your graft, you shall graft it after the fashion of a Goats foot, make a cleft in the Stocke of the Plant, not direct, but byas, and that smooth and even, not rough: then apply and make fast thereto, the graft with all his Barke on, and answering to the barke of the Plant. This being done, couer the place with the fat earth and mosse of the Woods tyed together with a strong band: sticke a pole of Wood by it, to keepe it stedfast.

## C H A P. IIII.

*Grafting like a Scutcheon.*

**I**n gratting after the manner of a Scutcheon, you shall not vary nor differ much from that of the Flute or Pipe, saue onely that the Scutcheon-like graft, hauing one eyelet, as the other hath yet the wood of the tree whereupon the Scutcheon-like graft is grafted, hath not any knob, or bud, as the wood whereupon the graft is grafted, after the manner of a pipe.

12.

In summer when the trees are well replenished with sap, and that their new Stems begin to grow somewhat hard, you shall take a shoot at the end of the chiefe branches of some noble and reclaimed tree, whereof you would faine haue some fruit, and not many of his old Moze or wood, and from thence raise a good eylet, the tayle and all thereof to make your graft. But when you chouse, take the thickest and grosest, diuide the tayle in the midst, before you doe any thing else, casting away the leafe (if it be not a Peare-plum-tree: for that would haue two or three leaues) without remouing any moze of the said tayle: afterward with the point of a sharpe knife, cut off the Barke of the said shoot, the patterne of a shield, of the length of a nayle.

13.

In which there is onely one eylet higher then the middle together, with the residue of the tayle which you left behinde: and for the lifting bp of the said graft in Scutcheon, after that you haue cut the barke of the shoot round about, without cutting



ting of the wood within, you must take it gently with your thumbe, and in cutting it away you must presse upon the wood from which you pull it, that so you may bring the bud and all away together with the Scutcheon: for if you leaue it behinde with the wood, then were the Scutcheon nothing worth. You shall finde out if the Scutcheon be nothing worth, if loosing within when it is pulled away from the wood of the same sute, you finde it to haue a hole within, but more manifestly, if the bud doe stay behind in the Wood, which ought to haue bene in the Scutcheon.

Thus your Scutcheon being well raised and taken off, hold it a little by the taile betwixt your lips, without wetting of it, euen vntill you haue cut the barke of the tree where you would graft it, and looke that it be cut without any wounding of the wood within, after the manner of a cratch, but somewhat longer then the Scutcheon that you haue to set in it, and in no place cutting the wood within; after you haue made incision, you must open it, and make it gape wide on both sides, but in all manner of gentle handling, and that with little Sizers of bone, and separating the wood and the barke a little within, euen so much as your Scutcheon is in length and breadth: you must take heed that in doing hereof, you doe not hurt the Barke.

This done, take your Scutcheon by the end, and your taile which you haue left remaining, and put into your incision made in your tree, lifting vp softly your two sides of the incision with your said Sizers of bone, and cause the said Scutcheon to ioyne, and lye as close as may be, with the wood of the tree, being cut, as aforesaid, in wapping a little vpon the end of your rinde: so cut and let the vpper part of your Scutcheon lye close vnto the vpper end of your incision, or barke of your said tree: afterward binde your Scutcheon about with a band of Hempe, as thicke as a pen of a quill, more or lesse, according as your tree is small or great, taking the same Hempe in the middest, to the end that either part of it may performe a like seruice; and wreathing and binding of the said Scutcheon into the incision of the Tree, and it must not be tied too strait, for that would keepe it from taking the ioyning of the one sap to the other, being hindered thereby, and neither the Scutcheon,



cheon, nor yet the Hempe must be moist, or wet: and the more  
 instly to binde them together, begin at the back side of the  
 Tree, right ouer against the middlest of the incision, and from  
 thence come forward to ioyne them before, aboue the eylet and  
 taylor of the Scutcheon, crossing your band of Hempe, so oft as  
 the two ends meet, and from hence returning backe againe,  
 come about and tye it likewise vnderneath the eylets: and thus  
 cast about your band still backward and forward, vntill the  
 whole cleft of the incision be couered aboue and below with the  
 said Hempe, the eylet onely excepted, and his taile which must  
 not be couered at all; his taile will fall away one part after an-  
 other, and that shortly after the ingrafting, if so be that the  
 Scutcheon will take. Leane your trees and Scutcheons thus  
 bound, for the space of one moneth, and the thicker a great deale  
 longer time. Afterward looke them ouer, and if you perceiue  
 them to grow together, vntie them, or at the leastwise cut the  
 Hempe behinde them, and leane them vncouered. Cut also your  
 branch two or three fingers aboue that, so the iunpe may pros-  
 per the better: and thus let them remaine till after Winter, a-  
 bout the moneth of March and Aprill.

18. If you perceiue that your bud of your Scutcheon doe swell  
 and come forward, then cut off the tree three fingers or there-  
 abouts, aboue the Scutcheon: for if it be cut off too nere the  
 Scutcheon, at such time as it putteth forth his first blossome, it  
 would be a meanes greatly to hinder the flowing of it, and  
 cause also that it should not thriue and prosper so well after  
 that one yeere is past, and that the shoot beginneth to be strong:  
 beginning to put forth the second bud and blossome, you must  
 goe forward to cut off in byas-wise the three fingers in the top  
 of the tree, which you left there, when you cut it in the yeere go-  
 ing before, as hath bene said.

19. When your shoot shall haue put forth a great deale of  
 length, you must sticke downe there, euen hard ioyned  
 thereunto, little stakes, tying them together very gently and  
 easily; and these shall stay your shoots and prop them vp, let-  
 ting the winde from doing any harme vnto them. Thus you  
 may graft white Roses in red, and red in white. Thus you  
 may graft two or three scutcheons: provided that they be all  
 of one side: for they will not be set equally together in height,  
 because



because then they would be all Kernalings, neither would they be directly one ouer another; for the lower would stay the rising vp of the sap of the tree, and so those above should consume in penury, and vndergoe the aforesaid inconvenience. You must note, that the scutcheon which is gathered from the side of a tree whose fruit is sowre, must be cut in square forme, and not in the plaine fashion of a scutcheon. It is ordinarie to graffe the sweet Quince tree, bassard Peach tree, Apricocke tree, Quince tree, sowre Cherry tree, sweet cherry tree, and Chestnut tree, after this fashion, howbeit they might be grafted in the cleft more easily, and more profitably; although diuers be of contrary opinion, as thus best: Take the grafts of sweet Quince tree, and bassard Peach tree, of the fairest wood, and best sed that you can finde, growing vpon the wood of two yeeres old, because the wood is not so firme nor solid as the others: and you shall graffe them vpon small Blumme-tree stockes, being of the thicknesse of ones thumbe; these you shall cut after the fashion of a Goates foot: you shall not goe about to make the cleft of any more sides then one, being about a foot high from the ground; you must open it with your small wedge: and being thus grafted, it will seeme to you that it is open but of one side: afterward you shall wrap it vp with a little Masse, putting thereto some gummed Wax, or Clay, and binde it vp with Oziers to keepe it surer, because the stocke is not strong enough it selfe to hold it, and you shall furnish it euery manner of way as others are dealt withall: this is most profitable.

20.

21.

*The time of grafting.*

All moneths are good to graft in (the moneth of October and November onely excepted) But commonly, graft at that time of the winter, when sap beginneth to arise.

In a cold Countrey graft later, and in a warme Countrey earlier.

The best time generall is from the first of February, untill the first of May.

The grafts must alwayes be gathered, in the old of the Moneth.

For grafts, chouse shotes of a yere old, or at the furthest two yeeres old.



If you must carry Grafts farre, pricke them into a Turnep newly gathered, or lay earth about the ends.

If you set stones of Plums, Almonds, Nuts, or Peaches: First let them lye a little in the Sunne, and then steape them in Milke or Water, three or foure dayes before you put them into the earth.

Dry the kernels of Pippins, and sowe them in the end of Nouember.

The stone of a Plum-tree must be set a foot deep in Nouember, or February.

The Date-stone must be set the great end downwards, two cubits deepe in the earth, in a place enriched with dung.

The Peach-stone would be set presently after the Fruit is eaten, some quantity of the flesh of the Peach remaining about the Stone.

If you will haue it to be excellent, graft it afterward vpon an Almond tree.

The little Stems of Cherry trees, growne thick with haire, roots, and those also which doe grow by from the roots of the great Cherry-trees, being remoued, doe grow better and sooner then they which come of stones: but they must be remoued and planted while they are but two or three yeeres old, the branches must be lopped.

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# THE HUSBAND-MANS FRUITFVLL ORCHARD.

*For the true ordering of all sorts of fruits in their due seasons; and how double increase commeth by care in gathering yeere after yeere: as also the best way of carriage by Land or by Waler: With their preservation for longest continuance.*

 **O**f all Stone Fruit, Cherries are the first to be gathered: of which, though we reckon foure sorts; English, Flemish, Gascoyne and Black, yet are they reduced to two, the early, and the ordinary: the early are those whose grafts came first from France and Flanders, and are now ripe with vs in May: the ordinary is our owne naturall Cherry, and is not ripe before June; they must be carefully kept from Birds, either with nets, noise, or other industry.

They are not all ripe at once, nor may be gathered at once, therefore with a light Ladder, made to stand of it selfe, without hurting the boughs, mount to the tree, and with a gathering hooke, gather those which be full ripe, and put them into your Cherry-pot, or kypsey hanging by your side, or vpon any bough you please, and be sure to breake no stalke, but that the Cherry hangs by; and pull them gently, lay them downe tenderly, and handle them as little as you can.

For the conueyance or portage of Cherries, they are best To carry to be carried in broad Baskets like Sines, with smooth yel- Cherries.  
ding



ding bottomes, onely two broad Laths going along the bottom : and if you doe transport them by Ship, or Boat, let not the Sines be fill'd to the top, lest setting one vpon another, you bruise and hurt the Cherries : if you carry by horsebacke, then Panniers well lined with Fearne, and packt full and close is the best and safest way.

Other stone  
fruit.

Now for y<sup>e</sup> gathering of all other stone-fruit, as Pertarines, Apricocks, Peaches, Pear-plums, Damsons, Bullas, and such like, although in their severall kinds, they seeme not to be ripe at once on one tree : yet when any is ready to drop from the tree, though the other seeme hard, they may also be gathered, for they haue receiued the full substance the tree can giue them ; and therefore the day being faire, and the dew drawne away ; set vp your Ladder, and as you gathered your Cherries, so gather them : onely in the bottomes of your large Sines, where you part them, you shall lay Pettles, and likewise in the top, for that will helpe to ripen those that are most vnready.

Gathering  
of Peares.

In gathering Peares, are three things obserued ; to gather for expence, for transportation, or to sell to the Apothecary. If for expence, and your owne vse, then gather them as soone as they change, and are as it were halfe ripe, and no more but those which are changed, letting the rest hang till they change also : for thus they will ripen kindly, and not rot so soone, as if they were full ripe at the gathering. But if your Peares be to be transported farre either by Land or Water, then pull one from the tree, and cut it in the middest, and if you finde it hollow about the choare, and the kernell a large space to lye in : although no Pear be ready to drop from the tree, yet then they may be gathered, & then laying them on a heape one vpon another, as of necessity they must be for transportation, they will ripen of themselves, and eat kindly : but gathered before, they will wither, shrinke and eat rough, losing not onely their taste, but beauty. Now for the manner of gathering : albeit some climbe into the trees by the boughs, and some by Ladder, yet both is amisse : the best way is with the Ladder before spoken of, which standeth of it selfe, and with a basket and a line, which being full, you must gently let down, and keeping the string still in your hand, being emptied, draw it vp againe,



## The Husband-mans fruitfull Orchard.

again, and so finish your labour, without troubling your selfe,  
or hurting the tree.

Now touching the gathering of Apples, it is to be done according to the ripening of the fruit; your Summer Apples first, and the winter after. For Summer Fruit, when it is ripe, some will drop from the tree, and birds will be picking at them: But if you cut one of the greenest, and finde it as was shew'd you before of the Beare: then you may gather them, and in the house they will come to their ripenesse and perfection. For your Winter fruit, you shall know the ripenesse by the observation before shew'd; but it must be gathered in a faire, Sunny, and dry day, in the waine of the Moone, and no winde in the East, also after the dew is gone away: for the least wet or moisture will make them subiect to rot and mil-dew: also you must haue an apzon to gather in, and to empty into the great baskets, and a hooke to draw the boughs vnto you, which you cannot reach with your hands at ease: the apzon is to be an ell euery way, lopt vp to your girdle, so as it may serue for either hand without any trouble: and when it is full, bridle one of your loopes, and empty it gently into the great Basket, for in throwing them downe roughly, their owne stalkes may prick them, and those which are prickt, will euer rot. Again, you must gather your fruit cleane without Leaves or Bzunts, because the one hurts the tree, for euery bzunt would be a stake for fruit to grow vpon: the other hurts the fruit by bruising, and pricking it as it is laid together, and there is nothing sooner rotteth fruit, then the greene and withered leaues lying amongst them; neither must you gather them without any stalk at all: for such fruit will begin to rot where the stalkes stand.

For such fruit as falleth from the trees, and are not gathered, they must not be laid with the gathered fruit: and of fallings there are two sorts; one that falls through ripenesse, and they are best, and may be kept to bake or roast: the other wind-falls, and before they are ripe; and they must be spent as they are gathered, or else they will wither and come to nothing: and therefore it is not good by any meanes to beat downe fruit with boales, or to carry them in Carts loose and logging, or in sacks where they may be bruised.

Gathering  
of Apples.

To vse the  
fallings.

When

## The Husband-mans fruitfull Orchard.

### Carriage of fruit.

When your fruit is gathered, you shall lay them in bape Baskets of Wicker, which will containe foure or six bushels, and so betweene two men, carry them to your Apple Loft, and in shewing or laying them downe, be very carefull that it be done with all gentlenesse, and leasure, laying every sort of fruit severall by it selfe: but if there be want of room, having so many sorts that you cannot lay them severally, then some such fruit as is nearest in taste and colour, and of winter fruit, such as will taste alike, may, if need require, be laid together, and in time you may separate them, as shall be shewed hereafter. But if your fruit be gathered farre from your Apple Loft, then must the bottomes of your Baskets be lined with greene Ferne, and draw the stubbozne ends of the same thzough the Basket, that none but the soft leafe may touch the fruit, and likewise cover the tops of the baskets with Ferne also, and draw small cord over it, that the Ferne may not fall away, nor the fruit scatter out, or iogge by and downe: and thus you may carry fruit by Land or by Water, by Boat, or Cart, as farre as you please: and the Ferne doth not onely keepe them from bruising, but also ripens them, especially Peares. When your fruit is brought to your Apple Loft or store-house, if you finde them not ripened inough, then lay them in thicker heapes upon Ferne, and cover them with Ferne also: and when they are nere ripe, then uncover them, and make the heapes thinner, so as the ayre may passe thozow them: and if you will not hasten the ripening of them, then lay them on the bare boards without any Ferne at all. Now for Winter, or long lasting Peares, they may be packt either in Ferne or straw, and carried whither you please; and bring come to the iourneys end, must be laid upon sweet straw, but beware the room be not too warme, nor windy, and too cold, for both are hurtfull: but in a temperate place, where they may have ayre, but not too much.

### Of War- dens.

### Of Medlers.

Wardens are to be gathered, carried, packt, and laid as winter Peares are.

Medlers are to be gathered about Michaelmas, after a frost hath toucht them; at which time they are in their full growth, and will then be dropping from the tree, but never ripe upon the tree. When they are gathered, they must be laid in a basket,

sur,



## The Husband-mans fruitfull Orchard.

fine, barrell, or any such caske, and to apt about with wollen cloathes, under, over, and on all sides, and also some waight laid upon them, with a board betwene: for except they be brought into a heat, they will neuer ripen kindly or taste well. Now when they have laine till you thinke some of them be ripe, the ripest, still as they ripen, must be taken from the rest: therefore powze them out into another fine or basket leasurely, that so you may well finde them that be ripest, letting the hard ones fall into the other basket, and those which be ripe laid aside: the other that be halfe ripe, seuer also into a third fine or basket: for if the ripe, and halfe ripe be kept together, the one will be mouldy, before the other be ripe: And thus doe, till all be thoroughly ripe.

Quinces should not be laid with other fruit; for the sent is offensive both to other fruit, and to those that keepe the fruit or come amongst them: therefore lay them by themselves upon sweet strawe, where they may haue ayze enough: they must be packt like Medlers, and gathered with Medlers.

Apples must be packt in Wheat or Rye straw, & in maunds or baskets lined with the same, and being gently handled, will ripen with such packing and lying together. If severall sorts of apples be packt in one maund or basket, then betwene euery sort, lay sweet strawe of a pretty thicknesse.

Apples must not be powzed out, but with care and leasure: first, the straw pickt cleane from them, and then gently take out euery severall sort, and place them by themselves: but if for want of room you must mixe the sorts together, then lay those together that are of equall lasting, but if they haue all one taste, then they need no separation. Apples that are not of like colours should not be laid together, and if any such be mingled, let it be amended, and those which are first ripe, let them be first spent; and to that end, lay those apples together, that are of one time of ripening: and thus you must vse Pippins also, yet will they indure bzuises better then other fruit, and whilst they are Greene will heale one another.

Pippins, though they grow of one tree, and in one ground, yet some will last better then other some, and some will be bigger then others of the same kinde, according as they haue more or lesse of the sunne, or more or lesse of the droppings of

Of Quinces.

To pickt Apples.

Emptying and laying Apples.

Difference in Fruit.



the trees or typer branches: therefore let every one make most of that fruit which is fairest, and longest lasting. Againe, the largenesse and goodnesse of fruit consists in the age of the tree: for as the tree increaseth, so the fruit increaseth in bignes, beauty, taste and firmenesse: and otherwise, as it decreaseth.

Transport-  
ing fruit by  
water.

If you be to transport your fruit far by water, then provide some dry hogs-heads or barrels, and packe in your apples, one by one with your hand, that no empty place may be left, to occasion fogging; and you must line your bestell at both ends with fine sweet straw; but not the sides, to avoid heat: and you must bore a dozen holes at either end, to receive ayre so much the better; and by no meanes let them take wet. Some vse, that transport beyond seas, to shut the fruit under hatches upon straw: but it is not so good, if caske may be gotten.

When not  
to transport  
fruit.

It is not good to transport fruit in March, when the winde blowes bitterly, nor in frosty weather, neither in the extreme heat of Summer.

To convey  
small store  
of fruit.

If the quantity be small you would carry, then you may carry them in Dollers or Banniers, provided they be ever filled close, and that Cherries & Peares be lined with greene Fearn, and Apples with sweet straw; and that, but at the bottomes and tops, not on the sides.

Roomes for  
fruit.

Winter fruit must lye neither too hot, nor too cold, too close, nor too open: for all are offensive. A lowe room or Celler that is sweet, and either boarded or paned, and not too close, is good, from Christmas till March: and rooms that are sealed over head, and from the ground, are good from March till May: then the Celler againe, from May till Michaelmas. The Apple best would be sealed or boarded, which if it want, then take the longest ripe straw, and raise it against the walls, to make a fence as high as the fruit lyeth: and let it be no thicker then to keepe the fruit from the wall, which being moyst, may doe hurt; or if not moyst, then the dust is offensive.

Sorting of  
fruit.

There are some fruit which will last but untill All-hallow-tide: they must be laid by themselves; then those which will last till Christmas, by themselves: then those which will last till it be Candlemas, by themselves: those which will last till Shrovetide, by themselves: & Pippins, Apple-Johns, Peares, maines,



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maines, and winter-Kustetings, which will last all the yere, by themselves.

Now if you spy any rotten fruit in your heapes, picke them out, and with a Trep for the purpose, see you turne the heapes over, and leave not a tainted Apple in them, dividing the hardest by themselves, and the broken skinned by themselves to be first spent, and the rotten ones to be cast away, and ever as you turne them, and picke them, vnder-lay them with fresh straw: thus shall you keepe them safe for your vse, which otherwise would rot suddenly.

Pippins, John Apples, Pearre-maines, and such like long-lasting fruit, need not be turned till the weeke before Christmas, vntlesse they be mixt with other of a riper kind, or that the fallings be also with them, or much of the first straw left amongst them: the next time of turning is at Shroue-tide, and after that, once a moneth till Whitson-tide; and after that, once a fortnight; and ever in the turning, lay your heapes lower and lower, and your straw very thin: provided you doe none of this labour in any great frost, except it be in a close Celler. At every thawe all fruit is moist, and then they must not be touched; neither in rainy weather, for then they will be danke also: and therefore at such seasons it is good to set open your windowes, and doores, that the ayre may haue free passage to dry them, as at nine of the clocke in the forenoone, and foure in the afternoone in Winter; and at six in the forenoone, and at eight at night in Summer; onely in March, open not your windowes at all.

Times of stirring fruit.

All lasting fruit, after the middest of May, begin to wither, Shriueling because then they ware dry, and the moisture gone, which made of fruit, them looke plump: they must needs wither, and be smaller; and nature decaying, they must needs rot. And thus much touching the ordering of fruits.

*F I N I S.*

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**T**He Booke of *Bees*, called the *feminine Monarchy*, written heretofore by *Mr Charles Butler*, and now so much desired, is set forth againe, corrected and augmented by the *Authors* further experience.